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A PHOTOGRAPHIC MONOGRAPH ON THE RICE VARIETIES OF TAIWAN

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謹此誌謝

FOREWORD

The present pamphlet is prepared by the Agronomy Department of this Institute upon the suggestion of Dr. H. T. Chang, Chief of the Plant Industry Division of JCRR, for the following two purposes: (1) The first aim is to bring together in one booklet the scientific information on all the Ponlai rice varieties now under extension and some important native varieties in Taiwan for ready reference of the plant breeders, extension workers, and teachers and students of agricultural colleges and vocational schools on this Island. A Chinese version of this pamphlet is also prepared. (2) Secondly, there has been an increasing interest in the Ponlai varieties of Taiwan shown by plant breeders of other countries, especially those of the Southeast Asian countries. It has been reported that in the interspecies hybridization made by some countries, the Taiwan Ponlai rice, being of the *Japonica* type, gives higher percentage of fertility than the genuine *Japonica* varieties when crossed with the *Indica* rice varieties. During the past eight years (November 1951—June 1959), the Taiwan Ponlai rice varieties have been sent to sixteen countries in four continents either for adaptation test or to be used as breeding material. This pamphlet will therefore provide information to foreign agriculturist who are interested in our rice varieties.

Although the compilation work is done by this Institute under the leadership of Mr. T. S. Miu, Chief of the Agronomy Department, much of the data are supplied by the seven (Taipei, Hsinchu, Taichung, Tainan, Kaohsiung, Taitung and Hwalien) District Agricultural Improvement Stations and the Chiayi Agricultural Experiment Station of this Institute. To all the stations which supplied data, the Institute wishes to express its deep appreciation. Gratitude is also due to the JCRR which not only proposed the preparation of this pamphlet but also provided funds for its compilation and printing.

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EDITOR'S PREFACE

Some five years ago, the editor was requested by the FAO of the United Nations to fill in some blank forms with informations on the breeding stock materials of rice varieties being kept in Taiwan. This had naturally led to an idea of the need of compiling a photographic monograph which will give the necessary descriptions of those major economic crops that are now growing in Taiwan, so that it might be helpful in the service of international exchange for planting materials. Being further encouraged by Dr. H. T. Chang, Chief of the Plant Production Division, JCRR, a project entitled "Collection of Specimens and preparation of Booklets on 17 Main Crops of Taiwan" was no sooner submitted to the JCRR to apply for financial subsidy for printing this monograph. It has finally become realized.

The present volume on rice varieties represents only our first-step effort toward the plan of compiling a more or less comprehensive monograph on all major economic crops of this island. More volumes on the crops such as wheat, barley, sweet potatoes, peanut, jute, flax, ramie, etc. will be expected to issue before long.

It might be worthwhile to include here some background history of the rice cultivation in Taiwan so that those who are supposed to interest in utilizing the planting materials as herein presented, could be better acquainted with the situations which should be informative in making choice of the materials for the benefit of their own.

The origin of the rice crop in Taiwan is not fully clear. Although some natural habitat of the wild rice (Oryza formosana) have been discovered in swampy places near the districts of Miaoli and Taoyuan Hsiens, but it seems to be that no direct kinship with the cultivated rice varieties of Taiwan could definitely be found. It is quite certain that the rice cultivation in Taiwan had long been practised by the aboriginal tribes of this island. Many centuries ago, they came to this island possibly from the southern Pacific islands and brought along with them some rice varieties for the purpose of supplying their needs as food and as raw material for wine.

Later on, the mainlanders of China, almost exclusively the people of the Fukien and Kwangtung provinces, accrossed the Taiwan strait and found settlement in this island. Thereafter, many rice varieties of mainland origin were incessantly introduced by them. All the varieties thus introduced were, invariably, of the Indica type being collectively named as the "native" rice varieties. Even during the period of occupation by the Dutch (1624—1660), more people from the coastal provinces of the southern China continued to immigrate to this island. The rice production in Taiwan became gradually flourished with the increase in population and with the encouragement of the Dutch officiers. Taiwan was recaptured in 1661, by the Chinese through the efforts of Cheng Chen-kung who was known to westerners as Koxinga, and under whose administratorship the acreage of rice field extended steadily, the number of which had been risen to 30,000 hectares. With the growing powerfulness of the Chinese "Chin" Dynasty which took over the reign of this island since 1683. Emphases were given to the development of new irrigation systems which resulted a greater extension of the rice acreage and that a total of 200,000 hectares was reached.

The Japanese occupation of this island began in 1894. Whereupon, they introduced the Japonica type of rice varieties into this island. In the process of building the introduced rice varieties of Japonica type more adaptable to the subtropical environment of this island, breeding crosses of the Japonica type with the Indica type or with other lines of the Japonica type were successfully tried and brought forth the so called "Ponlai" rice varieties.

After the world War II, Taiwan was again returned to China. Under the strenuous efforts of the present Chinese Government, measures have been taken to rehabilitate the agriculture of this island. More new irrigation projects are being undertaken, new technics of rice breeding adopted, better varieties of "Ponlai" rice certified or released, and heavier application of fertilizers practised, all of which have greatly increased the production of rice. The rice acreage become extended to 800,000 hectares (include the acreage of both the first and the second rice crops) as contrasted to the acreage of around 680,000 hectares during the period prior to the World War II. Records of the rice yield per unit area have also shown to be higher than that during the period of Japanese control.

It may be surmised from the foregoing statements that the whole development of the rice improvement program in Taiwan can be subdivided into four stages:

(1) The registration of better native rice varieties. From 1909 to 1920, 390 better varieties were registered and selected out of the 1,679 native varieties examined or investigated. By way of the combined selection process of nature and farmers over the years elapsed, only about 262 of the registered varieties have now been retained.

(2) The introduction of Japanese varieties. From 1920 to 1926, some rice varieties of Japonica type were introduced into Taiwan from Japan for commercial growing. But they did not show with too much promise on account of their lower acreage yield. However, the problem had been mitigated to a great extent by the finding of using younger age of seedlings in transplanting.

(3) Cross breeding of the introduced Japanese rice varieties. As the introduced Japanese rice varieties were poorer in yield and more susceptible to the blast disease, the hybridization technic of breeding was then employed to improve their yielding ability and disease resistance. The so called "Ponlai" rice varieties were the outcome of such crosses. Experimental studies indicated that the Ponlai rice retained the most characteristics of the Japonica type, especially in the grain shape and table quality, but exhibited much better adaptability to the subtropical climate and resistance to blast disease.

(4) The present works on rice improvement. Since 1945, the year of retrocession of Taiwan to China, pedigreed method of selection of native varieties and cross breeding of Ponlai rice have been resumed in a quite large scale. Many new rice varieties of both types have continuously been developed which possess more desirable characteristics and greater capacities of resistance to blast disease as well as to adverse environments.

At the present time, the rice acreage planted to the first and the second crops is in a ratio of 3:4. For the first crop, about 54% of the acreage is planted to the Ponlai rice and 38% to the native rice; while for the second crop, about 47% is planted to the Ponlai rice and 43% to the native varieties. Besides the greater number of rice varieties of either types are non-glutinous, there grows also some glutinous varieties and upland rice crop. The acreage of the former is about 16,000 hectares and the latter, 50,000 hectares.

Included in this monograph are some 94 rice varieties in all. They represent the most popular or important rice varieties of Taiwan. I sincerely hope that this monograph may be

found useful especially to those who are constantly and painstakingly in search of superior germplasm of rice for breeding endeavors.

In the last, hearty thanks are due to Professor Y.L. Ku of National Taiwan University, Dr. H.T. Chang, Mr. H.S. Chang and Dr. D.T. Chang of JCRR for their valuable advices and encouragement, and to the seven District Agricultural Improvement Stations and the Chiayi Branch Station of this Institute, and to several others who helped in various ways in the preparation of this monograph. Appreciation is herein expressed to those who would let the editor to know their criticisms and opinions should, in this monograph, there be any important facts or items which are either incorrect or have been left from our attention, so that they can be revised in the next edition.

Tsin-san Miu, the Editor
Chief of the Agronomy Department
Taiwan Agricultural Research Institute
Taipei, Taiwan
Free China

December 16, 1959

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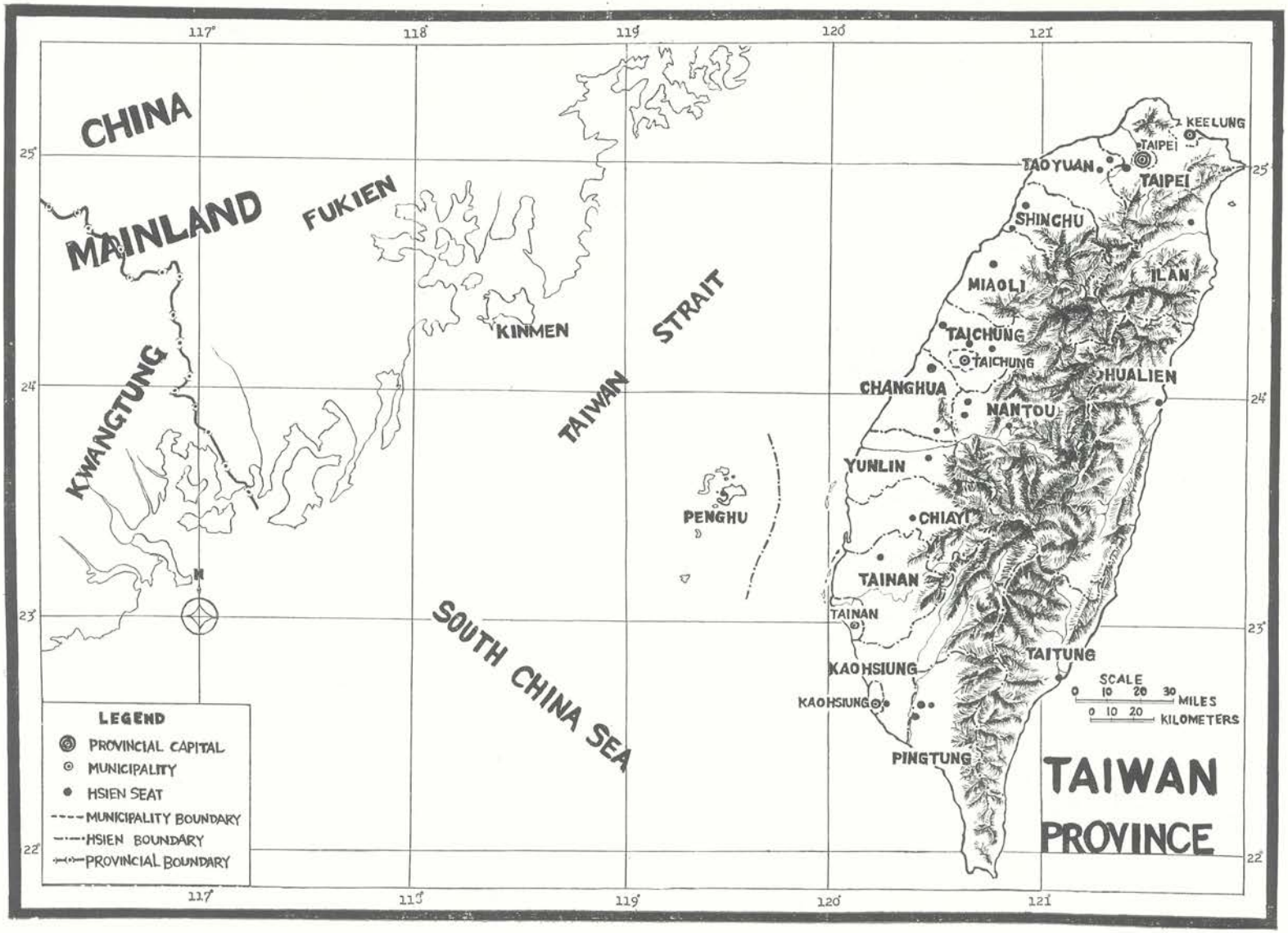
TAIWAN PROVINCE

REPUBLIC OF CHINA



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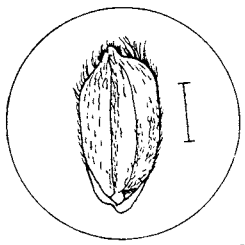

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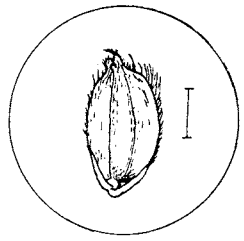

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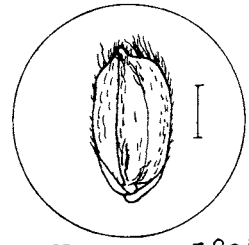

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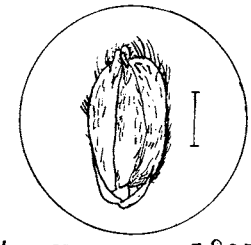

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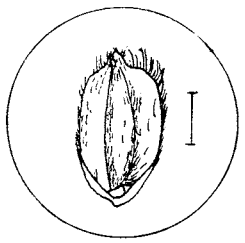

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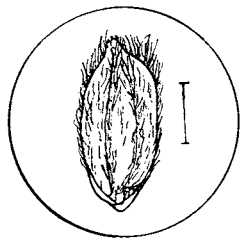

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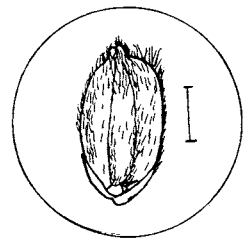

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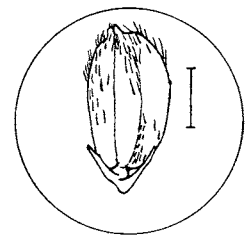

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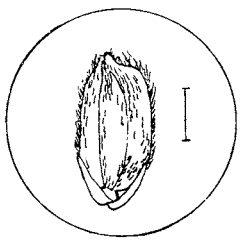

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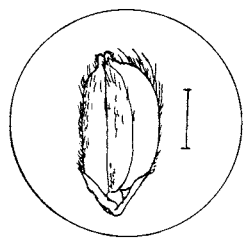

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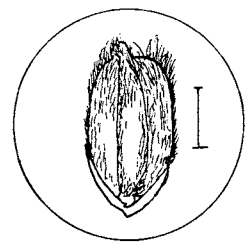

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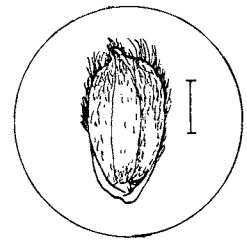

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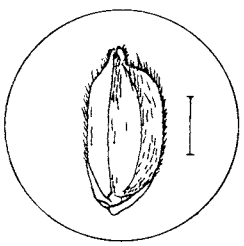

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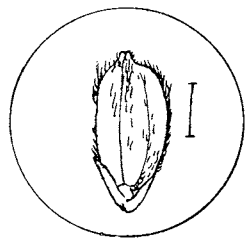

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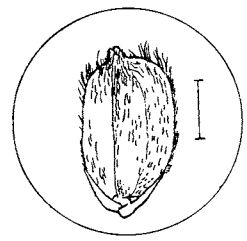

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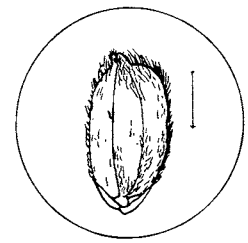

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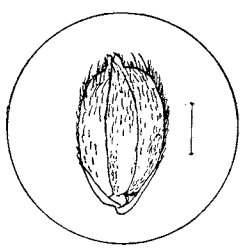

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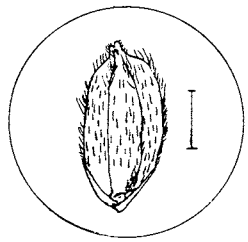

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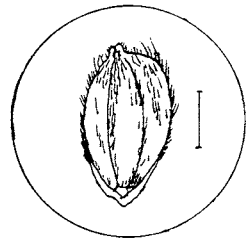

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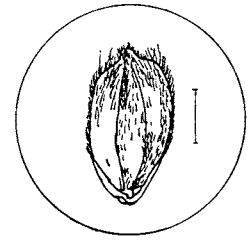
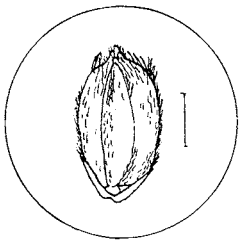
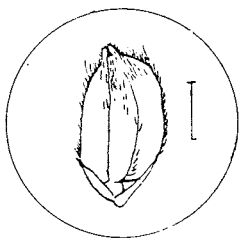
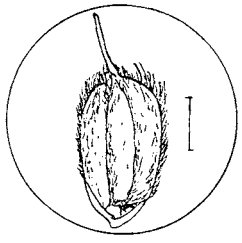
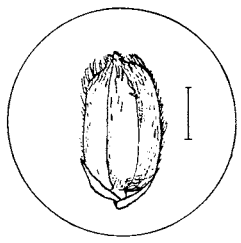
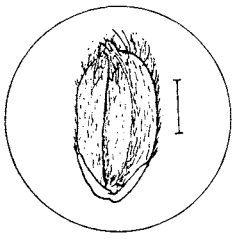
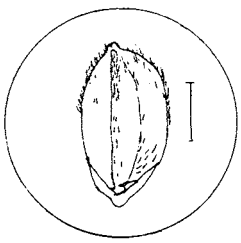
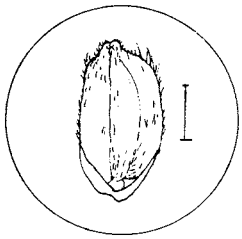
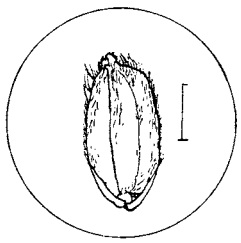
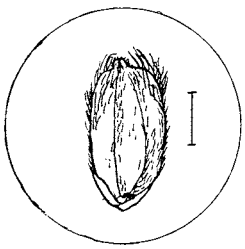
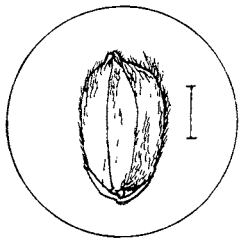
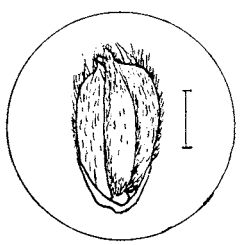
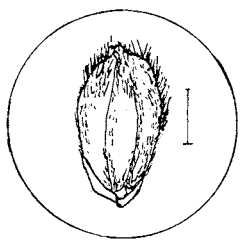
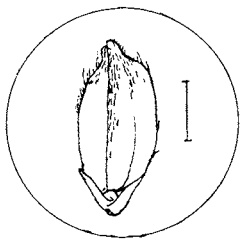
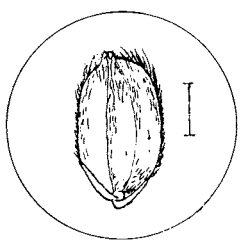
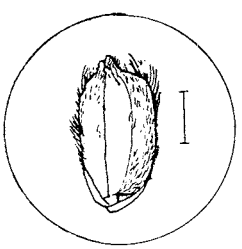
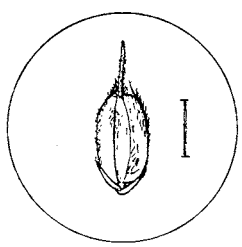
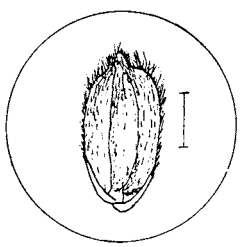
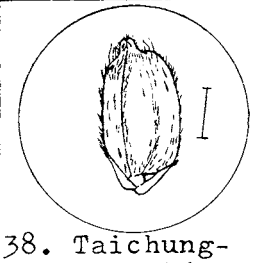
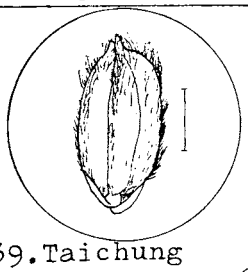
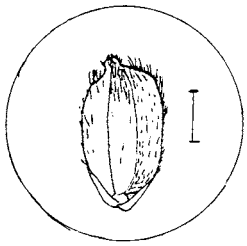
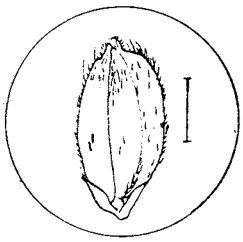


20. Hsinchu 55 (新竹 55 號)

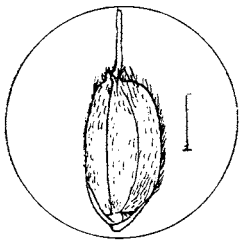
 21. Hsinchu 56 (新竹 56 號)	 22. Taichung 65 (臺中 65 號)	 23.Taichung 122 (臺中 122號)	 24.Taichung 150 (臺中 150號)
 25.Taichung 153 (臺中 153號)	 26.Taichung 155 (臺中 155號)	 27.Taichung 160 (臺中 160號)	 28.Taichung 162 (臺中 162號)
 29.Taichung 170 (臺中 170號)	 30.Taichung 171 (臺中 171號)	 31.Taichung 172 (臺中 172號)	 32.Taichung 173 (臺中 173號)
 33.Taichung 176 (臺中 176號)	 34.Taichung 178 (臺中 178號)	 35.Taichung 179 (臺中 179號)	 36.Taichung 180 (臺中 180號)
 37. Kwan-fu 401 (光復 401號)	 38. Taichung-glu. 46 (臺中糯46號)	 39.Taichung Special No.6 (臺中特 6號)	40. Chia-nung 242 (嘉農 242號)



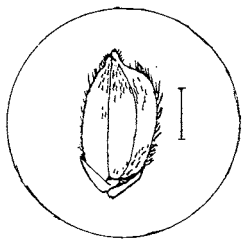
41. Chia-nan 2
（嘉南 2 號）



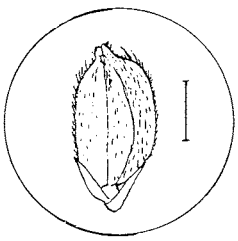
42. Chia-nan 8
（嘉南 8 號）



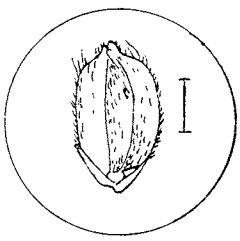
43. Chia-nan 14
（嘉南 14 號）



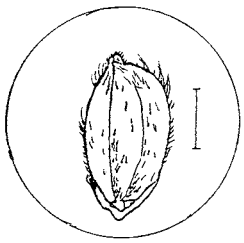
44. Tainan 1
（臺南 1 號）



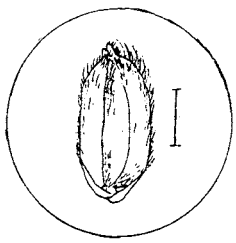
45. Tainan 2
（臺南 2 號）



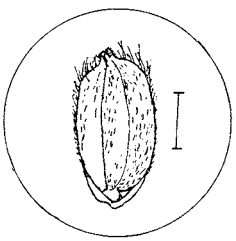
46. Tainan 3
（臺南 3 號）



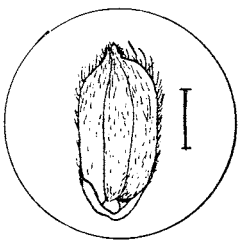
47. Kaohsiung 10
（高雄 10 號）



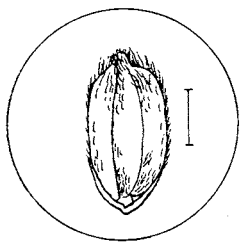
48. Kaohsiung 18
（高雄 18 號）



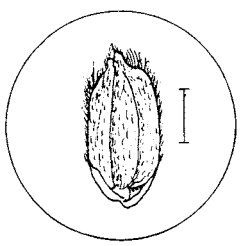
49. Kaohsiung 22
（高雄 22 號）



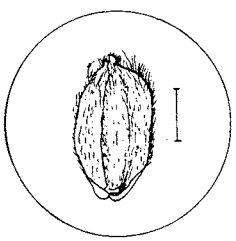
50. Kaohsiung 24
（高雄 24 號）



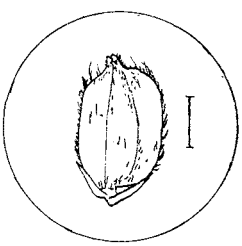
51. Kaohsiung 27
（高雄 27 號）



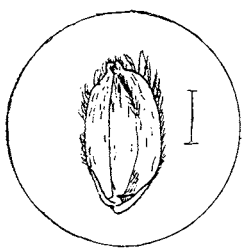
52. Kaohsiung 41
（高雄 41 號）



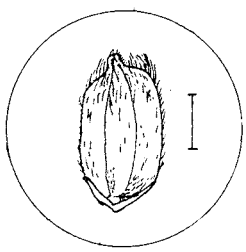
53. Kaohsiung 45
（高雄 45 號）



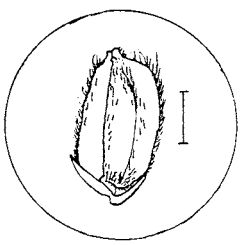
54. Kaohsiung 53
（高雄 53 號）



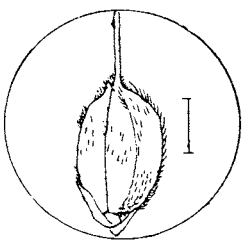
55. Kaohsiung 64
（高雄 64 號）



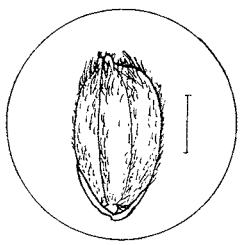
56. Kaohsiung 68
（高雄 68 號）



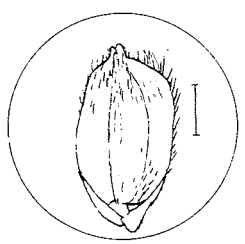
57. YOSHINO No.1
（吉野 1 號）



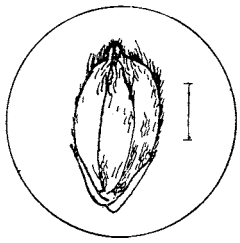
58. Hualian 5
（花蓮 5 號）



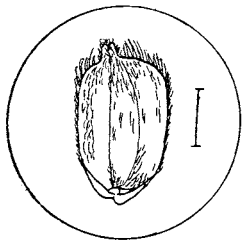
59. Hualian 17
（花蓮 17 號）



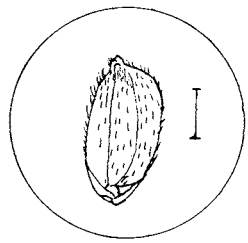
60. Taitung 1
（臺東 1 號）



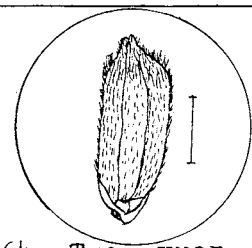
61. Taitung 16
(臺東 16 號)



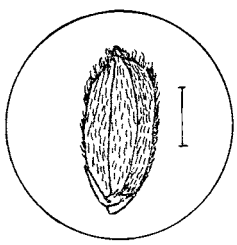
62. Taitung 24
(臺東 24 號)



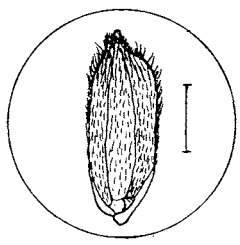
63. Bir-me-fen
(白米粉)



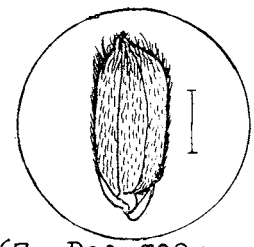
64. Tsai-yuan-thon
(菜園種)



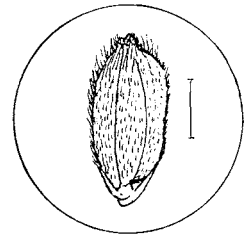
65. I-kung-pao
(蟻公包)



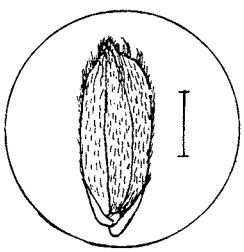
66. Liu-chow
(柳 州)



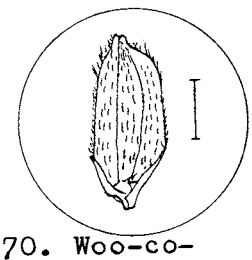
67. Dee-geo-woo-gen
(低脚烏尖)



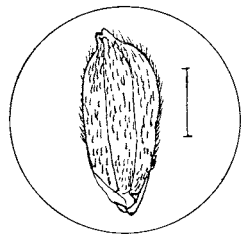
68. Woo-gen
(烏 尖)



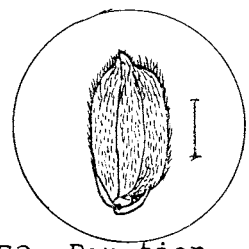
69. Ya-lun
(亞 崙)



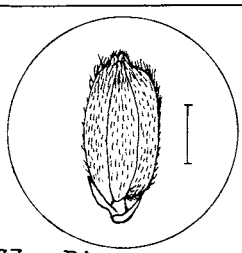
70. Woo-co-chin-yu
(烏殼清油)



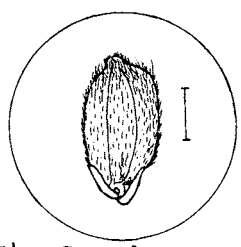
71. I-geo-tze
(矮脚仔)



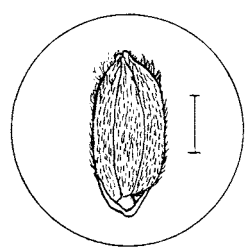
72. Ban-tien-tze
(半天仔)



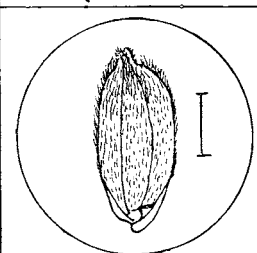
73. Bir-co-chin-yu
(白殼清油)



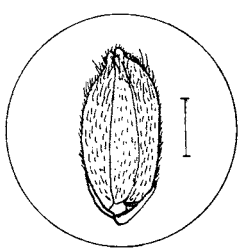
74. Dan-kwang-hwa-loo
(短廣花螺)



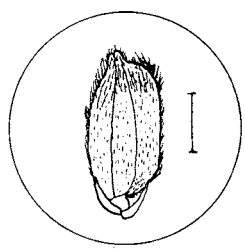
75. Liu-tou-tze
(柳頭仔)



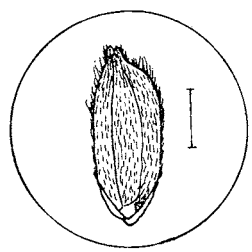
76. Kao-geo liu-chow
(高脚柳州)



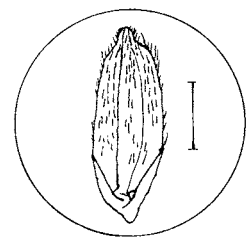
77. Woo-li
(烏 粒)



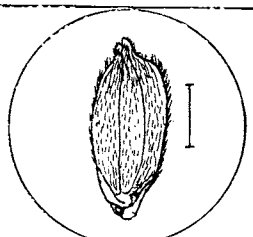
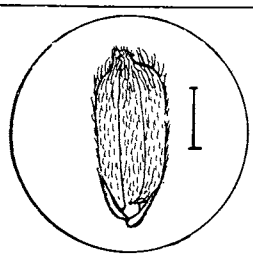
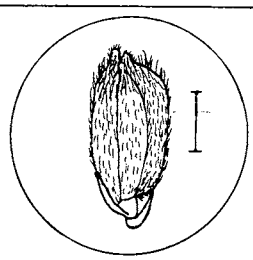
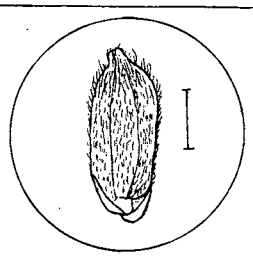
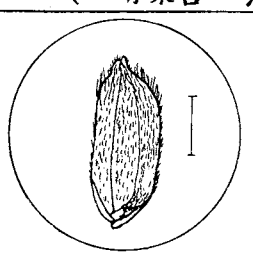
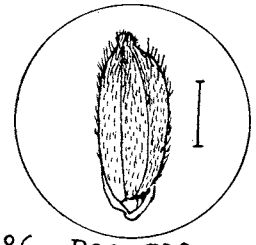
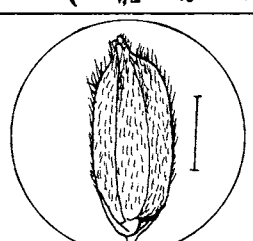
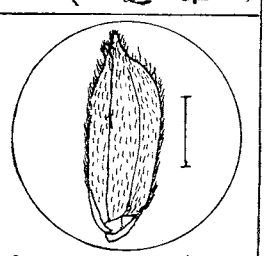
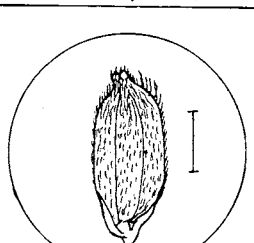
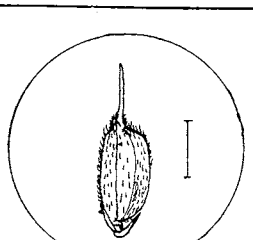
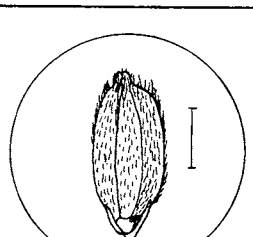
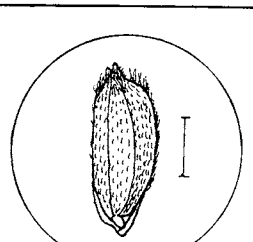
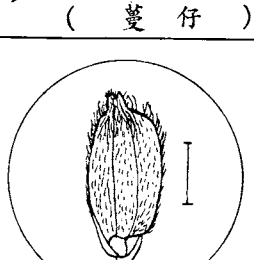
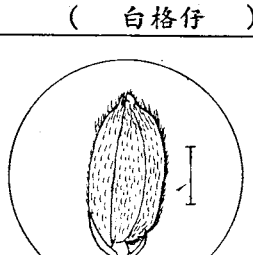
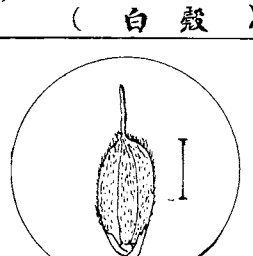
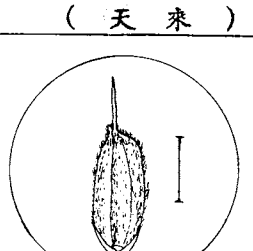
78. Hwa-loo
(花 螺)



79. Bir-co-tze
(白殼仔)



80. Mean-down
(敏 黨)

 81. Chin-gou-tsan (菁菓占)	 82。Shun-gan (霜降)	 83. Guze (格仔)	 84。Siam (暹羅)
 85. Niao-yao (鳥咬)	 86. Dee-geo-mean-don (低脚敏黐)	 87. Bir-co-yuan-li (白殼員粒)	 88. Tainan-ta-bir (臺南大白)
 89. Man-tze (蔓仔)	 90. Bir-co-tze (白格仔)	 91。Bir-co (白殼)	 92. Tien-lie (天來)
 93. Yuan-li (員粒)	 94. Chu-tze (粗仔)	 95。Upland Tai-nung No.1 (陸稻臺農1號)	 96。Upland Tai-nung No.2 (陸稻臺農2號)

Name of Variety

Tai-nung 38

(臺農 38 號)

(I) Type: Kēng (粳) or Japonica.

(II) Origin of the variety: KAMEJI—SHINRIKI—IWATA ASAHI—Taichung 65—Tai-nung 38.

(III) Breeding station: Taiwan Agricultural Research Institute.

(IV) Period of breeding:

1. Year cross was made: 1931.
2. Year selected: 1940.

(V) Cultural characteristics:

1. Adaptation: Adapted to the northern part of the province, and suitable for growing during both the 1st and the 2nd crops. Yielded well on rich soil.
2. Growing period:
   (1) Time of sowing:
      (a) 1st crop: Late January,
      (b) 2nd crop: Early to mid-July.
   (2) Time of harvesting:
      (a) 1st crop: Mid-July,
      (b) 2nd crop: Mid-November.
   (3) Average number of growing days:
      (a) From sowing to transplanting:
         (i) 1st crop: 30–45 days, (ii) 2nd crop: 13–15 days.
      (b) From transplanting to harvesting:
         (i) 1st crop: 123 days, (ii) 2nd crop: 105 days.

(VI) Agronomic characters:

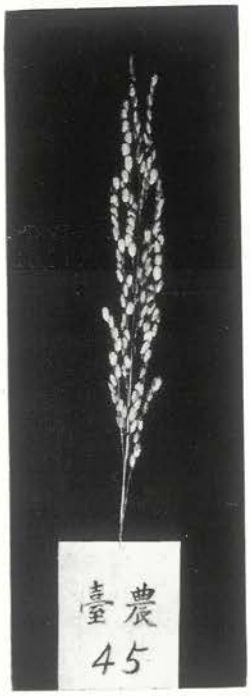
1. Average height in cm: 101.9 (1st crop), 98.5 (2nd crop).
2. Average number of tillers: 23.0 (1st crop), 19.4 (2nd crop).
3. Straw strength: Non-lodged.
4. Shattering habit: Not likely to shatter.
5. Time of maturity: Late.
6. Pest resistance: Comparatively resistant to rice blast disease.
7. Yield of paddy per hectare: 4,299 kg (1st crop), 3,586 kg (2nd crop).
8. Rice Quality: Excellent in table quality.
9. Other morphological data:

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Tai-nung 38	deep green	purplish brown	green	green	white	light yellow	light yellow	awnless	short	

Name of Variety

Tai-nung 45

(臺農 45 號)



(I) Type: Kêng (粳) or Japonica.

(II) Origin of the variety: MAY-BARRI—Chiayi-late No. 2—Tai-nung 16—Tai-nung 45. KAMEJI—SHINRIKI—Taichung 65—Tai-nung 45.

(III) Breeding station: Taiwan Agricultural Research Institute.

(IV) Period of breeding:

1. Year cross was made: 1931.
2. Year selected: 1940.

(V) Cultural characteristics:

1. Adaptation: Adapted to the central and southern regions of the province as the Taichung, Yunlin, and Taitung areas. Yielded well on irrigated and rich paddy soil.
2. Growing period:
   (1) Time of sowing:
      (a) 1st crop: Late January,
      (b) 2nd crop: Early July.
   (2) Time of harvesting:
      (a) 1st crop: Early July,
      (b) 2nd crop: Early November.
   (3) Average number of growing days:
      (a) From sowing to transplanting:
         (i) 1st crop: 30–45 days, (ii) 2nd crop: 14–20 days.
      (b) From transplanting to harvesting:
         (i) 1st crop: 122 days, (ii) 2nd crop: 102 days.

(VI) Agronomic characters:

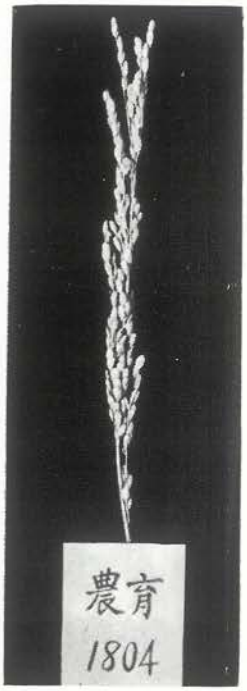
1. Average height in cm: 104.4 (1st crop), 104.8 (2nd crop).
2. Average number of tillers: 19.0 (1st crop), 14.5 (2nd crop).
3. Straw strength: Lodged on very rich soil.
4. Shattering habit: Extremely non-shattering habit, the grains are rather tough in detachment.
5. Time of maturity: Late.
6. Pest resistance: Comparatively resistant to rice blast disease.
7. Yield of paddy per hectare: 4,545 kg (1st crop), 3,627 kg (2nd crop).
8. Rice Quality: Exclient in table quality.
9. Other morphological data:

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Tai-nung 45	green	brown	green	green	white	light yellow	yellow	awnless	short	

Name of Variety

Nung-yu 1804

(農育 1804)



(I) Type: Kêng (粳) or Japonica.

(II) Origin of the variety: Taichung 114 × NAKAMURA.

(III) Breeding station: Taiwan Agricultural Research Institute.

(IV) Period of breeding:

1. Year cross was made: 1941.
2. Year selected: 1947.

(V) Cultural characteristics:

1. Adaptation: Adapted to the northern parts of the province such as Miaoli, Hsinchu, Taipei, and I-lan areas. Better suited for growing as the 1st crop, and yielded well on somewhat less fertile soil.
2. Growing period:
   (1) Time of sowing:
      (a) 1st crop: Late January,
      (b) 2nd crop: Early to mid-July.
   (2) Time of harvesting:
      (a) 1st crop: Mid-July,
      (b) 2nd crop: Mid-November.
   (3) Average number of growing days:
      (a) From sowing to transplanting:
         (i) 1st crop: 30–45 days, (ii) 2nd crop: 14 days.
      (b) From transplanting to harvesting:
         (i) 1st crop: 121 days, (ii) 2nd crop: 108 days.

(VI) Agronomic characters:

1. Average height in cm: 100.3 (1st crop), 101.6 (2nd crop).
2. Average number of tillers: 14.7 (1st crop), 9.6 (2nd crop).
3. Straw strength: Non-lodged.
4. Shattering habit: Not likely to shatter.
5. Time of maturity: Mid-season.
6. Pest resistance: Fairly resistant to rice blast disease.
7. Yield of paddy per hectare: 4,455 kg (1st crop), 3,799 kg (2nd crop).
8. Rice Quality: Good in table quality.
9. Other morphological data:

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Nung-yu 1804	deep green	purplish brown	green	green	white	light yellow	light yellow	awnless	short	

Name of Variety

Nung-yu 1805

(農育 1805)

(I) Type: Kêng (粳) or Japonica.

(II) Origin of the variety: Taichung 114 × NAKAMURA.

(III) Breeding station: Taiwan Agricultural Research Institute.

(IV) Period of breeding:

1. Year cross was made: 1941.
2. Year selected: 1947.

(V) Cultural characteristics:

1. Adaptation: More adapted to the northern parts of the province such as Miaoli, Hsinchu, Taipei, and I-lan areas. Yielded well on rich soil, and suitable for growing as the 1st crop.
2. Growing period:
   (1) Time of sowing:
      (a) 1st crop: Late January,
      (b) 2nd crop: Early to mid-July.
   (2) Time of harvesting:
      (a) 1st crop: Mid-July,
      (b) 2nd crop: Mid-November.
   (3) Average number of growing days:
      (a) From sowing to transplanting:
         (i) 1st crop: 30–45 days, (ii) 2nd crop: 14 days.
      (b) From transplanting to harvesting:
         (i) 1st crop: 121 days, (ii) 2nd crop: 108 days.

(VI) Agronomic characters:

1. Average height in cm: 101.3 (1st crop), 102.7 (2nd crop).
2. Average number of tillers: 14.2 (1st crop), 9.8 (2nd crop).
3. Straw strength: Non-lodged.
4. Shattering habit: Not likely to shatter.
5. Time of maturity: Mid-season.
6. Pest resistance: Fairly resistant to rice blast disease.
7. Yield of paddy per hectare: 4,422 kg (1st crop), 3,839 kg (2nd crop).
8. Rice Quality: Good in table quality.
9. Other morphological data:

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Nung-yu 1805	deep green	purplish brown	green	green	white	light yellow	light yellow	awnless	short	

Name of Variety

Nung-yu 1830

(農育 1830)

(I) Type: Kêng (粳) or Japonica.

(II) Origin of the variety: Taichung 114 × NAKAMURA.

(III) Breeding station: Taiwan Agricultural Research Institute.

(IV) Period of breeding:

1. Year cross was made: 1941.
2. Year selected: 1947.

(V) Cultural characteristics:

1. Adaptation: Adapted to the northern regions of Taiwan such as Miaoli, Hsinchu, Taipei and I-lan areas. Suitable for growing during both the 1st and the 2nd crops.
2. Growing period:
   (1) Time of sowing:
      (a) 1st crop: Late January,
      (b) 2nd crop: Early to mid-July.
   (2) Time of harvesting:
      (a) 1st crop: Mid-July,
      (b) 2nd crop: Mid-November.
   (3) Average number of growing days:
      (a) From sowing to transplanting:
         (i) 1st crop: 30–45 days, (ii) 2nd crop: 14 days.
      (b) From transplanting to harvesting:
         (i) 1st crop: 121 days, (ii) 2nd crop: 108 days.

(VI) Agronomic characters:

1. Average height in cm: 100.8 (1st crop), 102.6 (2nd crop).
2. Average number of tillers: 14.7 (1st crop), 10.1 (2nd crop).
3. Straw strength: Non-lodged.
4. Shattering habit: Not likely to shatter.
5. Time of maturity: Mid-season.
6. Pest resistance: Fairly resistant to rice blast disease.
7. Yield of paddy per hectare: 4,377 kg (1st crop), 4,013 kg (2nd crop).
8. Rice Quality: Good in table quality.
9. Other morphological data:

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Nung-yu 1830	deep green	purplish brown	green	green	white	light yellow	light yellow	awnless	short	

Name of Variety

Taipei 7

(臺北 7 號)

(I) Type: Kêng (粳) or Japonica.

(II) Origin of the variety: KYONISHIKI—OSAKI-ASAKI—Taipei 6; MEIJI HO—YOKICHI—Taipei 5; Taipei 6—Taipei 7.

(III) Breeding station: Taipei District Agricultural Improvement Station.

(IV) Period of breeding:

1. Year cross was made: 1935.
2. Year selected: 1939.

(V) Cultural characteristics:

1. Adaptation: Adapted to high precipitation area as the Keelung and Taipei prefecture. Yielded well on loam and sandy loam soil. Tolerated heavy fertilization.
2. Growing period:
   (1) Time of sowing:
      (a) 1st crop: Late January to late February,
      (b) 2nd crop: Early July.
   (2) Time of harvesting:
      (a) 1st crop: Mid-July,
      (b) 2nd crop: Early November.
   (3) Average number of growing days:
      (a) From sowing to transplanting:
         (i) 1st crop: 30–45 days, (ii) 2nd crop: 14 days.
      (b) From transplanting to harvesting:
         (i) 1st crop: 116 days, (ii) 2nd crop: 98 days.

(VI) Agronomic characters:

1. Average height in cm: 104.7 (1st crop), 104.8 (2nd crop).
2. Average number of tillers: 12.8 (1st crop), 11.0 (2nd crop).
3. Straw strength: Stiff-strawed.
4. Shattering habit: Not likely to shatter.
5. Time of maturity: Mid-season.
6. Pest resistance: Resistant to diseases.
7. Yield of paddy per hectare: 3,216 kg (1st crop), 3,039 kg (2nd crop).
8. Rice Quality: Good in table quality.
9. Other morphological data:

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Taipei 7	deep green	vellow	green	green	light yellow	yellow	light yellow	awnless	short	

Name of Variety

Taipei 8

(臺北 8 號)

(I) Type: Kêng (粳) or Japonica.

(II) Origin of the variety: Taipei 6 × Taipei 5.

(III) Breeding station: Taipei District Agricultural Improvement Station.

(IV) Period of breeding:

1. Year cross was made: 1935.
2. Year selected: 1939.

(V) Cultural characteristics:

1. Adaptation: More adapted to the Taipei district. Yielded better on loam and sandy loam soil. Poor response to rich soil.
2. Growing period:
   (1) Time of sowing:
      (a) 1st crop: Late January to early February,
      (b) 2nd crop: Early July.
   (2) Time of harvesting:
      (a) 1st crop: Mid-July,
      (b) 2nd crop: Late October.
   (3) Average number of growing days:
      (a) From sowing to transplanting:
         (i) 1st crop: 30--45 days, (ii) 2nd crop: 14 days.
      (b) From transplanting to harvesting:
         (i) 1st crop: 114 days, (ii) 2nd crop: 96 days.

(VI) Agronomic characters:

1. Average height in cm: 95.5 (1st crop), 96.0 (2nd crop).
2. Average number of tillers: 12.6 (1st crop), 11.7 (2nd crop).
3. Straw strength: Non-lodged.
4. Shattering habit: Not likely to shatter.
5. Time of maturity: Mid-season.
6. Pest resistance: Weak resistance to diseases.
7. Yield of paddy per hectare: 3,434 kg (1st crop), 3,273 kg (2nd crop).
8. Rice Quality: Good in table quality.
9. Other morphological data:

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Taipei 8	deep green	yellow	green	green	light yellow	yellow	light yellow	awnless	short	

Name of Variety

Taipei 127

(臺北 127號)

(I) Type: Kêng (粳) or Japonica.

(II) Origin of the variety: Taichung 65 × Chin-gao-an.

(III) Breeding station: Taipei District Argicultural Improvement Station.

(IV) Period of breeding:

1. Year cross was made: 1936.
2. Year selected: 1941.

(V) Cultural characteristics:

1. Adaptation: Better adapted to the Taipei and I-lan areas with relatively less rainfall. Yielded well on loam and sandy loam soil with good irrigation. Tolerated heavy fertilization.
2. Growing period:
   (1) Time of sowing:
      (a) 1st crop: Early February,
      (b) 2nd crop: Mid-July.
   (2) Time of harvesting:
      (a) 1st crop: Early July,
      (b) 2nd crop: Mid-November.
   (3) Average number of growing days:
      (a) From sowing to transplanting:
         (i) 1st crop: 35 days, (ii) 2nd crop: 18 days.
      (b) From transplanting to harvesting:
         (i) 1st crop: 115 days, (ii) 2nd crop: 95 days.

(VI) Agronomic characters:

1. Average height in cm: 98.4 (1st crop), 96.1 (2nd crop).
2. Average number of tillers: 11.6 (1st crop), 15.3 (2nd crop).
3. Straw strength: Non-lodged.
4. Shattering habit: Not likely to shatter.
5. Time of maturity: Mid-season.
6. Pest resistance: Resistant to diseases.
7. Yield of paddy per hectare: 3,561 kg (1st crop), 3,402 kg (2nd crop).
8. Rice Quality: Good in table quality.
9. Other morphological data:

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Taipei 127	deep green	yellow-ish white	green	light green	light yellow	light brown	light yellow	awnless	short	

Name of Variety

Taipei 177

(臺北 177號)

(I) Type: Kêng (粳) or Japonica.

(II) Origin of the variety: Hwang-gien × ASAHI.

(III) Breeding station: Taipei District Agricultural Improvement Station.

(IV) Period of breeding:

1. Year cross was made: 1936.
2. Year selected: 1941.

(V) Cultural characteristics:

1. Adaptation: Best adapted to the Taipei area with less rainfall. Yielded well on loam and sandy loam soil of average fertility and with good irrigation.
2. Growing period:
   (1) Time of sowing:
      (a) 1st crop: Early February,
      (b) 2nd crop: Mid-July.
   (2) Time of harvesting:
      (a) 1st crop: Mid-July,
      (b) 2nd crop: Mid-November.
   (3) Average number of growing days:
      (a) From sowing to transplanting:
         (i) 1st crop: 35 days, (ii) 2nd crop: 18 days.
      (b) From transplanting to harvesting:
         (i) 1st crop: 116 days, (ii) 2nd crop: 93 days.

(VI) Agronomic characters:

1. Average height in cm: 94.7 (1st crop), 97.3 (2nd crop).
2. Average number of tillers: 10.8 (1st crop), 15.3 (2nd crop).
3. Straw strength: Lodged on very rich soil.
4. Shattering habit: Not likely to shatter.
5. Time of maturity: Mid-season.
6. Pest resistance: Not resistant to disease.
7. Yield of paddy per hectare: 3,216 kg (1st crop), 3,369 kg (2nd crop).
8. Rice Quality: Good in table quality.
9. Other morphological data:

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Taipei 177	green	yellow	green	light green	light yellow	light brown	light yellow	awnless	short	

Name of Variety

Taipei 301

(臺北 301號)

(I) Type: Kêng (粳) or Japonica.

(II) Origin of the variety: Taichung 65 × Chin-gao-an.

(III) Breeding station: Taipei District Agricultural Improvement Station.

(IV) Period of breeding:

1. Year cross was made: 1936.
2. Year selected: 1941.

(V) Cultural characteristics:

1. Adaptation: Best adapted to the Hsin-chuang section of Taipei Hsien with relatively less rainfall. Yielded well on loam and sandy loam soil with good irrigation.
2. Growing period:
   (1) Time of sowing:
      (a) 1st crop: Early February,
      (b) 2nd crop: Mid-July.
   (2) Time of harvesting:
      (a) 1st crop: Mid-July,
      (b) 2nd crop: Mid-November.
   (3) Average number of growing days:
      (a) From sowing to transplanting:
         (i) 1st crop: 44 days, (ii) 2nd crop: 14 days.
      (b) From transplanting to harvesting:
         (i) 1st crop: 117 days, (ii) 2nd crop: 94 days.

(VI) Agronomic characters:

1. Average height in cm: 90.4 (1st crop), 97.3 (2nd crop).
2. Average number of tillers: 11.8 (1st crop), 13.7 (2nd crop).
3. Straw strength: Non-lodged.
4. Shattering habit: Not likely to shatter.
5. Time of maturity: Mid-season.
6. Pest resistance: Resistant to rice blast.
7. Yield of paddy per hectare: 3,004 kg (1st crop), 3,372 kg (2nd crop).
8. Rice Quality: Good in table quality.
9. Other morphological data:

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Taipei 301	green	brown	green	light green	light yellow	light brown	yellow-ish brown	few, short awns	short	

Name of Variety

Taipei 306

(臺北 306號)

(I) Type: Kêng (粳) or Japonica.

(II) Origin of the variety: Taipei 5 × Taipei 6.

(III) Breeding station: Taipei District Agricultural Improvement Station.

(IV) Period of breeding:

1. Year cross was made: 1934.
2. Year selected: 1956.

(V) Cultural characteristics:

1. Adaptation: Best adapted for growing in the Taipei area. May tolerate the rainy season of Taipei. Yielded well on loam, sandy loam, and clayey loam soil. Susceptible to heavy fertilization.
2. Growing period:
   (1) Time of sowing:
      (a) 1st crop: Late January to early February,
      (b) 2nd crop: Early July.
   (2) Time of harvesting:
      (a) 1st crop: Mid-July,
      (b) 2nd crop: Early November.
   (3) Average number of growing days:
      (a) From sowing to transplanting:
         (i) 1st crop: 42 days, (ii) 2nd crop: 15 days.
      (b) From transplanting to harvesting:
         (i) 1st crop: 124 days, (ii) 2nd crop: 104 days.

(VI) Agronomic characters:

1. Average height in cm: 102.4 (1st crop), 97.2 (2nd crop).
2. Average number of tillers: 17.3 (1st crop), 14.8 (2nd crop).
3. Straw strength: Non-lodged.
4. Shattering habit: Not likely to shatter.
5. Time of maturity: Late.
6. Pest resistance: Disease resistance only fair.
7. Yield of paddy per hectare: 4,978 kg (1st crop), 3,358 kg (2nd crop).
8. Rice Quality: Good in table quality.
9. Other morphological data:

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Taipei 306	green	light yellow	green	green	light yellow	yellow	yellow	awnless	short	

Name of Variety

Taipei 307

(臺北 307號)

(I) Type: Kêng (粳) or Japonica.

(II) Origin of the variety: Hwang-gien × ASAHI.

(III) Breeding station: Taipei District Agricultural Improvement Station.

(IV) Period of breeding:

1. Year cross was made: 1941.
2. Year selected: 1956.

(V) Cultural characteristics:

1. Adaptation: Best adapted to the Taipei area with high precipitation. Yielded well on loam and sandy loam soil.
2. Growing period:
   (1) Time of sowing:
      (a) 1st crop: Late January to early February,
      (b) 2nd crop: Early July.
   (2) Time of harvesting:
      (a) 1st crop: Mid-July,
      (b) 2nd crop: Early November.
   (3) Average number of growing days:
      (a) From sowing to transplanting:
         (i) 1st crop: 42 days, (ii) 2nd crop: 15 days.
      (b) From transplanting to harvesting:
         (i) 1st crop: 124 days, (ii) 2nd crop: 102 days.

(VI) Agronomic characters:

1. Average height in cm: 94.2 (1st crop), 106.1 (2nd crop).
2. Average number of tillers: 14.3 (1st crop), 12.7 (2nd crop).
3. Straw strength: Non-lodged.
4. Shattering habit: Not likely to shatter.
5. Time of maturity: Late.
6. Pest resistance: Fairly resistant to rice blast.
7. Yield of paddy per hectare: 4,628 kg (1st crop), 3,385 kg (2nd crop).
8. Rice Quality: Good in table quality.
9. Other morphological data:

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Taipei 307	deep green	brown	deep green	deep green	light yellow	light yellow-ish brown	yellow-ish brown	awnless	short	

Name of Variety

Hsinchu 4

(新竹 4 號)

(I) Type: Kêng (粳) or Japonica.

(II) Origin of the variety: Tai-nung 16 × Taichung 65.

(III) Breeding station: Hsinchu District Agricultural Improvement Station.

(IV) Period of breeding:

1. Year cross was made: 1932.
2. Year selected: 1937.

(V) Cultural characteristics:

1. Adaptation: Best adapted to the Hsinchu area having neither too dry nor too moist weather. Yielded well on loam and sandy loam soil with good irrigation.
2. Growing period:
   (1) Time of sowing:
      (a) 1st crop: Early February,
      (b) 2nd crop: Mid-July.
   (2) Time of harvesting:
      (a) 1st crop: Late June,
      (b) 2nd crop: Late October.
   (3) Average number of growing days:
      (a) From sowing to transplanting:
         (i) 1st crop: 45 days, (ii) 2nd crop: 15 days.
      (b) From transplanting to harvesting:
         (i) 1st crop: 110 days, (ii) 2nd crop: 86 days.

(VI) Agronomic characters:

1. Average height in cm: 94.9 (1st crop), 94.3 (2nd crop).
2. Average number of tillers: 15.8 (1st crop), 12.1 (2nd crop).
3. Straw strength: Non-lodged.
4. Shattering habit: Not likely to shatter.
5. Time of maturity: Early.
6. Pest resistance: Not very resistant to disease.
7. Yield of paddy per hectare: 3,197 kg (1st crop), 2,648 kg (2nd crop).
8. Rice Quality: Superior in table or cooking quality.
9. Other morphological data:

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Hsinchu 4	green	purplish black	light green	light green	white	light yellow	yellow	awnless	short	

Name of Variety

Hsinchu 24

(新竹 24 號)

(I) Type: Kêng (粳) or Japonica.

(II) Origin of the variety: MITSUI × Late ASAHI.

(III) Breeding station: Hsinchu District Agricultural Improvement Station.

(IV) Period of breeding:

1. Year cross was made: 1936.
2. Year selected: 1939.

(V) Cultural characteristics:

1. Adaptation: Best adapted to the Hsinchu area. Yielded well on clayey loam soil with good irrigation.
2. Growing period:
   (1) Time of sowing:
      (a) 1st crop: Early February,
      (b) 2nd crop: Mid-July.
   (2) Time of harvesting:
      (a) 1st crop: Early July,
      (b) 2nd crop: Early November.
   (3) Average number of growing days:
      (a) From sowing to transplanting:
         (i) 1st crop: 48 days, (ii) 2nd crop: 17 days.
      (b) From transplanting to harvesting:
         (i) 1st crop: 118 days, (ii) 2nd crop: 97 days.

(VI) Agronomic characters:

1. Average height in cm: 97.3 (1st crop), 95.9 (2nd crop).
2. Average number of tillers: 14.0 (1st crop), 14.6 (2nd crop).
3. Straw strength: Likely to lodge, especially in the 2nd crop when attacked by the Sclerotial disease.
4. Shattering habit: Not likely to shatter.
5. Time of maturity: Mid-season.
6. Pest resistance: Resistant to rice blast, but not to sclerotial disease.
7. Yield of paddy per hectare: 3,737 kg (1st crop), 3,217 kg (2nd crop).
8. Rice Quality: Medium in table quality.
9. Other morphological data:

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Hsinchu 24	green	light white	light green	light green	white	light yellow	yellow	awnless	medium	

Name of Variety

Hsinchu 50

(新竹 50 號)

(I) Type: Kêng (粳) or Japonica.

(II) Origin of the variety: AIKAWA × SENSAKE 4.

(III) Breeding station: Hsinchu District Agricultural Improvement Station.

(IV) Period of breeding:

1. Year cross was made: 1939.
2. Year selected: 1943.

(V) Cultural characteristics:

1. Adaptation: Best adapted to the Hsinchu area. Yielded well on loam soil with good irrigation and drainage.
2. Growing period:
   (1) Time of sowing:
      (a) 1st crop: Early February,
      (b) 2nd crop: Mid-July.
   (2) Time of harvesting:
      (a) 1st crop: Early July,
      (b) 2nd crop: Early November.
   (3) Average number of growing days:
      (a) From sowing to transplanting:
         (i) 1st crop: 48 days, (ii) 2nd crop: 18 days.
      (b) From transplanting to harvesting:
         (i) 1st crop: 117 days, (ii) 2nd crop: 98 days.

(VI) Agronomic characters:

1. Average height in cm: 96.9 (1st crop), 94.5 (2nd crop).
2. Average number of tillers: 12.4 (1st crop), 12.9 (2nd crop).
3. Straw strength: Non-lodged.
4. Shattering habit: Easy to shatter.
5. Time of maturity: Mid-season.
6. Pest resistance: Resistant to blast disease.
7. Yield of paddy per hectare: 3,137 kg (1st crop), 2,299 kg (2nd crop).
8. Rice Quality: Medium in table quality.
9. Other morphological data:

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Hsinchu 50	deep green	purplish black	light green	light green	white	light yellow	yellow	awnless	medium	

Name of Variety

Hsinchu 51

(新竹 51 號)

(I) Type: Kêng (粳) or Japonica.

(II) Origin of the variety: OSAKA-ASAHI × Late No. 2.

(III) Breeding station: Hsinchu District Agricultural Improvement Station.

(IV) Period of breeding:

1. Year cross was made: 1936.
2. Year selected: 1939.

(V) Cultural characteristics:

1. Adaptation: Best adapted to the Hsinchu area. Yielded well on loam soil with good irrigation and drainage.
2. Growing period:
   (1) Time of sowing:
      (a) 1st crop: Early February,
      (b) 2nd crop: Mid-July.
   (2) Time of harvesting:
      (a) 1st crop: Early July,
      (b) 2nd crop: Early November.
   (3) Average number of growing days:
      (a) From sowing to transplanting:
         (i) 1st crop: 47 days, (ii) 2nd crop: 16 days.
      (b) From transplanting to harvesting:
         (i) 1st crop: 113 days, (ii) 2nd crop: 94 days.

(VI) Agronomic characters:

1. Average height in cm: 95.7 (1st crop), 97.7 (2nd crop).
2. Average number of tillers: 13.2 (1st crop), 12.9 (2nd crop).
3. Straw strength: Non-lodged.
4. Shattering habit: Not likely to shatter.
5. Time of maturity: Mid-season.
6. Pest resistance: Resistant to blast disease.
7. Yield of paddy per hectare: 3,892 kg (1st crop), 3,263 kg (2nd crop).
8. Rice Quality: Good in table quality.
9. Other morphological data:

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Hsinchu 51	deep green	reddish brown	light green	light green	white	light yellow	yellow	awnless	medium	

Name of Variety

Hsinchu 52

(新竹 52 號)

(I) Type: Kêng (粳) or Japonica.

(II) Origin of the variety: OSAKA-ASAHI × Late No. 2.

(III) Breeding station: Hsinchu District Agricultural Improvement Station.

(IV) Period of breeding:

1. Year cross was made: 1936.
2. Year selected: 1939.

(V) Cultural characteristics:

1. Adaptation: Best adapted to the Hsinchu area. Yielded well on sandy loam soil with good irrigation and drainage.
2. Growing period:
   (1) Time of sowing:
      (a) 1st crop: Early to mid-February,
      (b) 2nd crop: Mid-July.
   (2) Time of harvesting:
      (a) 1st crop: Early July,
      (b) 2nd crop: Early November.
   (3) Average number of growing days:
      (a) From sowing to transplanting:
         (i) 1st crop: 48 days, (ii) 2nd crop: 16 days.
      (b) From transplanting to harvesting:
         (i) 1st crop: 123 days, (ii) 2nd crop: 100 days.

(VI) Agronomic characters:

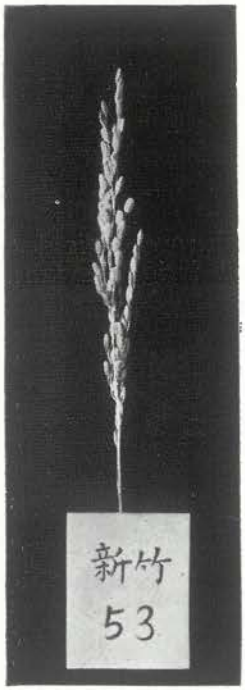
1. Average height in cm: 90.6 (1st crop), 90.2 (2nd crop).
2. Average number of tillers: 13.0 (1st crop), 14.5 (2nd crop).
3. Straw strength: Non-lodged.
4. Shattering habit: Extremely non-shattering habit.
5. Time of maturity: Late.
6. Pest resistance: Very resistant to rice blast, but not to sclerotial disease.
7. Yield of paddy per hectare: 3,675 kg (1st crop), 3,210kg (2nd crop).
8. Rice Quality: Good in table quality.
9. Other morphological data:

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Hsinchu 52	deep green	light white	light green	light green	white	light yellow	yellow	awnless	short	

Name of Variety

Hsinchu 53

(新竹 53 號)



(I) **Type:** Kêng (粳) or Japonica.

(II) **Origin of the variety:** Late ASAHI × MITSUI.

(III) **Breeding station:** Hsinchu District Agricultural Improvement Station.

(IV) **Period of breeding:**

1. **Year cross was made:** 1936.
2. **Year selected:** 1939.

(V) **Cultural characteristics:**

1. **Adaptation:** Best adapted to the Hsinchu area. Yielded well on sandy loam soil with good irrigation.
2. **Growing period:**
   (1) **Time of sowing:**
      (a) **1st crop:** Early to mid-February,
      (b) **2nd crop:** Mid-July.
   (2) **Time of harvesting:**
      (a) **1st crop:** Late June,
      (b) **2nd crop:** Late October to early November.
   (3) **Average number of growing days:**
      (a) **From sowing to transplanting:**
      (i) **1st crop:** 48 **days,** (ii) **2nd crop:** 19 **days.**
      (b) **From transplanting to harvesting:**
      (i) **1st crop:** 110 **days,** (ii) **2nd crop:** 86 **days.**

(VI) **Agronomic characters:**

1. **Average height in cm:** 98.6 (**1st crop**), 91.4 (**2nd crop**).
2. **Average number of tillers:** 13.6 (**1st crop**), 14.4 (**2nd crop**).
3. **Straw strength:** Lodged on very rich soil.
4. **Shattering habit:** Not likely to shatter.
5. **Time of maturity:** Early.
6. **Pest resistance:** Resistant to blast disease.
7. **Yield of paddy per hectare:** 3,682 **kg** (**1st crop**), 3,046 **kg** (**2nd crop**).
8. **Rice Quality:** Good in table quality.
9. **Other morphological data:**

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Hsinchu 53	green	reddish brown	green	green	white	light yellow	yellow	awnless	medium	

Name of Variety

Hsinchu 54

(新竹 54 號)

(I) Type: Kêng (粳) or Japonica.

(II) Origin of the variety: Late ASAHI × Late No. 2.

(III) Breeding station: Hsinchu District Agricultural Improvement Station.

(IV) Period of breeding:

1. Year cross was made: 1936.
2. Year selected: 1939.

(V) Cultural characteristics:

1. Adaptation: Best adapted to the Hsinchu area. Yielded well on sandy loam soil with good irrigation and drainage.
2. Growing period:
   (1) Time of sowing:
      (a) 1st crop: Early to mid-February,
      (b) 2nd crop: Mid-July.
   (2) Time of harvesting:
      (a) 1st crop: Early July,
      (b) 2nd crop: Early November.
   (3) Average number of growing days:
      (a) From sowing to transplanting:
         (i) 1st crop: 48 days, (ii) 2nd crop: 17 days.
      (b) From transplanting to harvesting:
         (i) 1st crop: 115 days, (ii) 2nd crop: 94 days.

(VI) Agronomic characters:

1. Average height in cm: 93.7 (1st crop), 96.8 (2nd crop).
2. Average number of tillers: 13.0 (1st crop), 13.6 (2nd crop).
3. Straw strength: Non-lodged.
4. Shattering habit: Not likely to shatter.
5. Time of maturity: Mid-season.
6. Pest resistance: Resistant to blast disease.
7. Yield of paddy per hectare: 3,572 kg (1st crop), 3,225 kg (2nd crop).
8. Rice Quality: Good in table quality.
9. Other morphological data:

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Hsinchu 54	deep green	light purplish black	light green	light green	white	light yellow	yellow	awnless	short	

Name of Variety

Hsinchu 55

(新竹 55 號)

(I) Type: Kêng (粳) or Japonica.

(II) Origin of the variety: Chia-nan 2 × Tai-nung 44.

(III) Breeding station: Hsinchu District Agricultural Improvement Station.

(IV) Period of breeding:

1. Year cross was made: 1939.
2. Year selected: 1943.

(V) Cultural characteristics:

1. Adaptation: Best adapted to the Hsinchu area. Yielded well on rich loam soil with good irrigation and drainage. Tolerated heavy fertilization.
2. Growing period:
   (1) Time of sowing:
      (a) 1st crop: Early January,
      (b) 2nd crop: Early to mid-July.
   (2) Time of harvesting:
      (a) 1st crop: Early July,
      (b) 2nd crop: Early to mid-November.
   (3) Average number of growing days:
      (a) From sowing to transplanting:
         (i) 1st crop: 48 days, (ii) 2nd crop: 17 days.
      (b) From transplanting to harvesting:
         (i) 1st crop: 119 days, (ii) 2nd crop: 98 days.

(VI) Agronomic characters:

1. Average height in cm: 93.3 (1st crop), 90.0 (2nd crop).
2. Average number of tillers: 12.9 (1st crop), 15.1 (2nd crop).
3. Straw strength: Non-lodged.
4. Shattering habit: Extremely non-shattering habit.
5. Time of maturity: Mid-season.
6. Pest resistance: Resistant to blast and sclerotial diseases.
7. Yield of paddy per hectare: 3,707 kg (1st crop), 3,380 kg (2nd crop).
8. Rice Quality: Good in table quality.
9. Other morphological data:

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Hsinchu 55	deep green	pale	green	green	white	pale	yellow	awnless	short	

Name of Variety

Hsinchu 56

(新竹 56 號)

(I) Type: Kêng (粳) or Japonica.

(II) Origin of the variety: Chia-nan 2 × Tai-nung 44.

(III) Breeding station: Hsinchu District Agricultural Improvement Station.

(IV) Period of breeding:

1. Year cross was made: 1939.
2. Year selected: 1943.

(V) Cultural characteristics:

1. Adaptation: Better adapted to all rice sections of the Hsinchu, Taoyuan, and Miaoli areas. Yielded well on rich loam soil. Tolerated heavy fertilization.
2. Growing period:
   (1) Time of sowing:
      (a) 1st crop: Early to mid-January,
      (b) 2nd crop: Early to mid-July.
   (2) Time of harvesting:
      (a) 1st crop: Early July,
      (b) 2nd crop: Early to mid-November.
   (3) Average number of growing days:
      (a) From sowing to transplanting:
         (i) 1st crop: 48 days, (ii) 2nd crop: 17 days.
      (b) From transplanting to harvesting:
         (i) 1st crop: 121 days, (ii) 2nd crop: 99 days.

(VI) Agronomic characters:

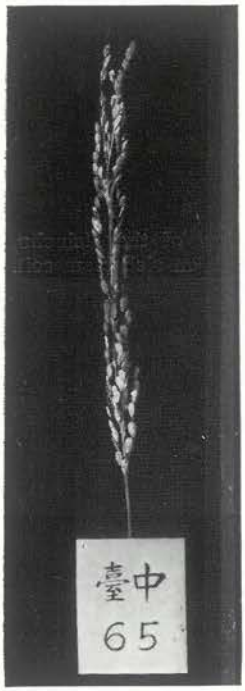
1. Average height in cm: 93.9 (1st crop), 91.6 (2nd crop).
2. Average number of tillers: 12.4 (1st crop), 13.6 (2nd crop).
3. Straw strength: Stiff-strawed.
4. Shattering habit: Extremely non-shattering habit.
5. Time of maturity: Mid-season.
6. Pest resistance: Very resistant to blast and sclerotial diseases.
7. Yield of paddy per hectare: 3,613 kg (1st crop), 3,225 kg (2nd crop).
8. Rice Quality: Medium in table quality.
9. Other morphological data:

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Hsinchu 56	deep green	pale	green	green	white	pale	yellow	awnless	short, bold grain	

Name of Variety

Taichung 65

(臺中 65 號)



(I) **Type:** Kêng (粳) or Japonica.

(II) **Origin of the variety:** KAMEJI × SHINRIKI.

(III) **Breeding station:** Taichung District Agricultural Improvement Station.

(IV) **Period of breeding:**

1. **Year cross was made:** 1924.
2. **Year selected:** 1927.

(V) **Cultural characteristics:**

1. **Adaptation:** Adapted to all rice growing regions of the province. Tolerated both dry and moist weather. Nonsensitive to photoperiod. Yielded well on a wide range of soil types having average soil fertility.
2. **Growing period:**
   (1) **Time of sowing:**
      (a) **1st crop:** Late January,
      (b) **2nd crop:** Late June to early July.
   (2) **Time of harvesting:**
      (a) **1st crop:** Late June to early July,
      (b) **2nd crop:** Early November.
   (3) **Average number of growing days:**
      (a) **From sowing to transplanting:**
         (i) **1st crop:** 30 **days,** (ii) **2nd crop:** 20 **days.**
      (b) **From transplanting to harvesting:**
         (i) **1st crop:** 121 **days,** (ii) **2nd crop:** 97 **days.**

(VI) **Agronomic characters:**

1. **Average height in cm:** 97.3 (**1st crop**), 96.3 (**2nd crop**).
2. **Average number of tillers:** 15.8 (**1st crop**), 16.4 (**2nd crop**).
3. **Straw strength:** Non-lodged.
4. **Shattering habit:** Not likely to shatter.
5. **Time of maturity:** Mid-season.
6. **Pest resistance:** Susceptible to blast disease.
7. **Yield of paddy per hectare:** 4,537 kg (**1st crop**), 3,997 kg (**2nd crop**).
8. **Rice Quality:** Good in table quality.
9. **Other morphological data:**

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Taichung 65	light green	purplish black	yellow-ish green	light green	white	white	yellow	awnless	short	the most popular variety in Taiwan

Name of Variety

Taichung 122

(臺中 122號)

(I) **Type:** Kêng (粳) or Japonica.

(II) **Origin of the variety:** Taichung 65 × Thichung Special 1.

(III) **Breeding station:** Taichung District Agricultural Improvement Station.

(IV) **Period of breeding:**

1. **Year cross was made:** 1932.
2. **Year selected:** 1935.

(V) **Cultural characteristics:**

1. **Adaptation:** Best adapted to the coastal regions of Changhua, and Taichung. Tolerated to salty soil. Yielded well on a wide range of soil types, and with good irrigation.
2. **Growing period:**
   (1) **Time of sowing:**
      (a) **1st crop:** Early January,
      (b) **2nd crop:** Late June to early July.
   (2) **Time of harvesting:**
      (a) **1st crop:** Late June to early July,
      (b) **2nd crop:** Late October to early November.
   (3) **Average number of growing days:**
      (a) **From sowing to transplanting:**
         (i) **1st crop:** 30 **days,** (ii) **2nd crop:** 20 **days.**
      (b) **From transplanting to harvesting:**
         (i) **1st crop:** 111 **days,** (ii) **2nd crop:** 95 **days.**

(VI) **Agronomic characters:**

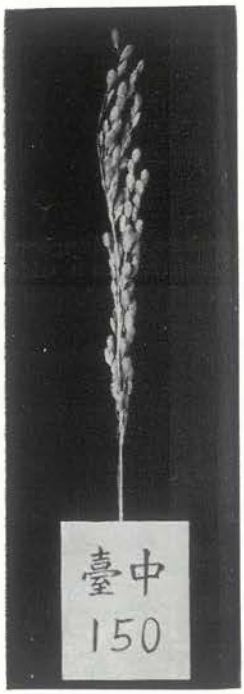
1. **Average height in cm:** 85.1 (1st crop), 96.0 (2nd crop).
2. **Average number of tillers:** 16.6 (1st crop), 14.4 (2nd crop).
3. **Straw strength:** Non-lodged.
4. **Shattering habit:** Not likely to shatter.
5. **Time of maturity:** Mid-season.
6. **Pest resistance:** Susceptible to disease.
7. **Yield of paddy per hectare:** 4,350 kg (1st crop), 3,890 kg (2nd crop).
8. **Rice Quality:** Good in table quality.
9. **Other morphological data:**

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Taichung 122	green	yellow	green	yellow-ish green	white	white	yellow	few, medium awns	short	

Name of Variety

Taichung 150

(臺中 150號)



(I) Type: Kêng (粳) or Japonica.

(II) Origin of the variety: KAMEJI, SHINRIKI — Taichung 65; Italy rice, Japonica — NC 4; Taichung 65 × NC 4 — Taichung 150.

(III) Breeding station: Taichung District Agricultural Improvement Station.

(IV) Period of breeding:

1. Year cross was made: ——
2. Year selected: 1938.

(V) Cultural characteristics:

1. Adaptation: Better adapted to the Taichung, Changhua, and Nantou areas. Yielded well on rich soil with good irrigattion. Very sensitive to photoperiod. Good response to heavy fertilization.
2. Growing period:
   (1) Time of sowing:
      (a) 1st crop: Late January,
      (b) 2nd crop: Late June to early July.
   (2) Time of harvesting:
      (a) 1st crop: Late June,
      (b) 2nd crop: Late October.
   (3) Average number of growing days:
      (a) From sowing to transplanting:
         (i) 1st crop: 30 days, (ii) 2nd crop: 18 days.
      (b) From transplanting to harvesting:
         (i) 1st crop: 112 days, (ii) 2nd crop: 89 days.

(VI) Agronomic characters:

1. Average height in cm: 102.0 (1st crop), 102.6 (2nd crop).
2. Average number of tillers: 17.0 (1st crop), 13.3 (2nd crop).
3. Straw strength: Non-lodged.
4. Shattering habit: Not likely to shatter.
5. Time of maturity: Mid-season.
6. Pest resistance: Resistant to blast disease.
7. Yield of paddy per hectare: 4,508 kg (1st crop), 3,792 kg (2nd crop).
8. Rice Quality: Good in table quality.
9. Other morphological data:

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Taichung 150	green	yellow	yellowish green	yellow	white	yellowish white	yellow	awnless	short	

Name of Variety

Taichung 153

(臺中 153號)

(I) Type: Kêng (粳) or Japonica.

(II) Origin of the variety: NC 4 / Taichung 65 — Taichung 114; (MIYAKO × Woo-gen) Spe. 2 / Taichung 65 — Taichung 116; — Taichung 153.

(III) Breeding station: Taichung District Agricultural Improvement Station.

(IV) Period of breeding:

1. Year cross was made: 1935.
2. Year selected: 1939.

(V) Cultural characteristics:

1. Adaptation: Better adapted to the Taichung, Changhua, Nantou, and Hsinchu areas. Insensitive to photoperiod. Yielded well on paddy fields with good irrigation. Toterated heavy fertilization.
2. Growing period:
   (1) Time of sowing:
      (a) 1st crop: Late January,
      (b) 2nd crop: Late June to early July.
   (2) Time of harvesting:
      (a) 1st crop: Late June to early July.
      (b) 2nd crop: Early November.
   (3) Average number of growing days:
      (a) From sowing to transplanting:
         (i) 1st crop: 30 days, (ii) 2nd crop: 20 days.
      (b) From transplanting to harvesting:
         (i) 1st crop: 114 days, (ii) 2nd crop: 98 days.

(VI) Agronomic characters:

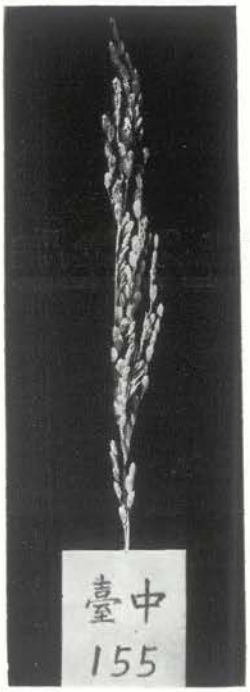
1. Average height in cm: 100.3 (1st crop), 94.2 (2nd crop).
2. Average number of tillers: 13.9 (1st crop), 13.9 (2nd crop).
3. Straw strength: Non-lodged.
4. Shattering habit: Not likely to shatter.
5. Time of maturity: Mid-season.
6. Pest resistance: Resistant to blast disease.
7. Yield of paddy per hectare: 4,728 kg (1st crop), 3,893 kg (2nd crop).
8. Rice Quality: Medium in table quality.
9. Other morphological data:

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Taichung 153	green	reddish brown	green	yellow	white	white	yellow	awnless	short	

Name of Variety

Taichung 155

(臺中 155號)



(I) **Type:** Kêng (粳) or Japonica.

(II) **Origin of the variety:** (Taichung 111 × Taichung 65) × Taichung 121 — (Taichung 65 × NC 4) × Taichung 115 — Taichung 155.

(III) **Breeding station:** Taichung District Agricultural Improvement Station.

(IV) **Period of breeding:**

1. **Year cross was made:** 1935.
2. **Year selected:** 1939.

(V) **Cultural characteristics:**

1. **Adaptation:** Better adapted to the Taichung, Miaoli, and Hsinchu areas. Yielded well on a wide range of soil types, and with good irrigation. Tolerated heavy fertilizatin.
2. **Growing period:**
   (1) **Time of sowing:**
   (a) **1st crop:** Late January to early February,
   (b) **2nd crop:** Late June to early July.
   (2) **Time of harvesting:**
   (a) **1st crop:** Late June,
   (b) **2nd crop:** Late October.
   (3) **Average number of growing days:**
   (a) **From sowing to transplanting:**
   (i) **1st crop:** 30 days, (ii) **2nd crop:** 20 days.
   (b) **From transplanting to harvesting:**
   (i) **1st crop:** 116 days, (ii) **2nd crop:** 97 days.

(VI) **Agronomic characters:**

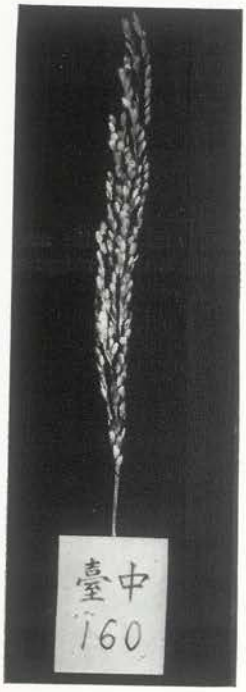
1. **Average height in cm:** 97.6 (1st crop), 98.6 (2nd crop).
2. **Average number of tillers:** 14.6 (1st crop), 13.2 (2nd crop).
3. **Straw strength:** Non-lodged.
4. **Shattering habit:** Not likely to shatter.
5. **Time of maturity:** Mid-season.
6. **Pest resistance:** Resistant to blast disease.
7. **Yield of paddy per hectare:** 4,643 kg (1st crop), 3,675 kg (2nd crop).
8. **Rice Quality:** Medium in table quality.
9. **Other morphological data:**

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Taichung 155	green	yellow	yellow-ish green	green	white	white	yellow	awnless	short	

Name of Variety

Taichung 160

(臺中 160號)



(I) Type: Kêng (粳) or Japonica.

(II) Origin of the variety: Golden Panicle / Taichung 65 / NC 4 — Taichung 114 — Taichung 160.

(III) Breeding station: Taichung District Agricultural Improvement Station.

(IV) Period of breeding:

1. Year cross was made: 1938.
2. Year selected: 1941.

(V) Cultural characteristics:

1. Adaptation: Better adapted to the Taichung, and Changhua areas. Insensitive to photoperiod. Yielded well on a wide range of soil types, and with good irrigation system. Tolerated heavy fertilization.
2. Growing period:
   (1) Time of sowing:
      (a) 1st crop: Late January to early February,
      (b) 2nd crop: Late June to early July.
   (2) Time of harvesting:
      (a) 1st crop: Late June to early July,
      (b) 2nd crop: Late October to early November.
   (3) Average number of growing days:
      (a) From sowing to transplanting:
         (i) 1st crop: 30 days, (ii) 2nd crop: 20 days.
      (b) From transplanting to harvesting:
         (i) 1st crop: 117 days, (ii) 2nd crop: 98 days.

(VI) Agronomic characters:

1. Average height in cm: 99.5 (1st crop), 98.0 (2nd crop).
2. Average number of tillers: 14.3 (1st crop), 13.2 (2nd crop).
3. Straw strength: Non-lodged.
4. Shattering habit: Not likely to shatter.
5. Time of maturity: Mid-season.
6. Pest resistance: Resistant to blast disease.
7. Yield of paddy per hectare: 4,506 kg (1st crop), 3,998 kg (2nd crop).
8. Rice Quality: Good in table quality.
9. Other morphological data:

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Taichung 160	light green	purplish black	yellowish green	light yellow	white	white	yellow	awnless	short	

Name of Variety

Taichung 162

(臺中 162號)

(I) Type: Kêng (粳) or Japonica.

(II) Origin of the variety: KAMEJI—YUBO-ASAHI→Taichung special 6—Taichung 162.

(III) Breeding station: Taichung District Agricultural Improvement Station.

(IV) Period of breeding:

1. Year cross was made: 1936.
2. Year selected: 1941.

(V) Cultural characteristics:

1. Adaptation: Better adapted to the Changhua, and Yunlin areas. Insensitive to photoperiod. Yielded well on a wide range of soil types, and with good irrigation.
2. Growing period:
   (1) Time of sowing:
      (a) 1st crop: Late January,
      (b) 2nd crop: Late June to early July.
   (2) Time of harvesting:
      (a) 1st crop: Late June to early July,
      (b) 2nd crop: Late October to early November.
   (3) Average number of growing days:
      (a) From sowing to transplanting:
         (i) 1st crop: 30 days, (ii) 2nd crop: 20 days.
      (b) From transplanting to harvesting:
         (i) 1st crop: 114 days, (ii) 2nd crop: 98 days.

(VI) Agronomic characters:

1. Average height in cm: 99.9 (1st crop), 95.8 (2nd crop).
2. Average number of tillers: 13.9 (1st crop), 13.1 (2nd crop).
3. Straw strength: Non-lodged.
4. Shattering habit: Not likely to shatter.
5. Time of maturity: Mid-season.
6. Pest resistance: Susceptible to blast disease.
7. Yield of paddy per hectare: 4,506 kg (1st crop), 3,998 kg (2nd crop).
8. Rice Quality: Medium in table quality.
9. Other morphological data:

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Taichung 162	green	purplish black	yellowish green	light green	white	white	yellow	awnless	short	

Name of Variety

Taichung 170

(臺中 170號)

(I) Type: Kêng (粳) or Japonica.

(II) Origin of the variety:

Italy rice — NC 4 — Taichung 150
Japonica
KAMEJI — Taichung 65
SHINRIKI
Taichung 150 + Nung-rin 1 — Taichung 170.

(III) Breeding station: Taichung District Agricultural Improvement Station.

(IV) Period of breeding:

1. Year cross was made: 1943.
2. Year selected: 1946.

(V) Cultural characteristics:

1. Adaptation: Adapted to the western part of the province from Taipei to Pintung. Insensitive to photoperiod, and temperature. Yielded well on a wide range of soil types, and with good irrigation. Poor response to heavy fertilization.
2. Growing period:
   (1) Time of sowing:
      (a) 1st crop: Late January,
      (b) 2nd crop: Late July.
   (2) Time of harvesting:
      (a) 1st crop: Late June,
      (b) 2nd crop: Late October.
   (3) Average number of growing days:
      (a) From sowing to transplanting:
         (i) 1st crop: 30 days, (ii) 2nd crop: 20 days.
      (b) From transplanting to harvesting:
         (i) 1st crop: 121 days, (ii) 2nd crop: 98 days.

(VI) Agronomic characters:

1. Average height in cm: 114.7 (1st crop), 101.3 (2nd crop).
2. Average number of tillers: 18.8 (1st crop), 15.3 (2nd crop).
3. Straw strength: Non-lodged.
4. Shattering habit: Easy to shatter during 1st crop.
5. Time of maturity: Mid-season.
6. Pest resistance: Susceptible to blast disease.
7. Yield of paddy per hectare: 4,528 kg (1st crop), 3,911 kg (2nd crop).
8. Rice Quality: Good in table quality.
9. Other morphological data:

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Taichung 170	deep green	yellow	yellow-ish green	yellow	white	yellow-ish white	yellow	awnless	short	

Name of Variety

Taichung 171

(臺中 171號)

(I) Type: Kêng (粳) or Japonica.

(II) Origin of the variety: K_2 × Tai-nung 45.

(III) Breeding station: Taichung District Agricultural Improvement Station.

(IV) Period of breeding:

1. Year cross was made: 1950.
2. Year selected: 1953.

(V) Cultural characteristics:

1. Adaptation: Best adapted to the Taichung district, especially to the section where rice blast disease is most prevalent. Insensitive to day-length.
2. Growing period:
   (1) Time of sowing:
      (a) 1st crop: Late January,
      (b) 2nd crop: Early July.
   (2) Time of harvesting:
      (a) 1st crop: Late June,
      (b) 2nd crop: Late October.
   (3) Average number of growing days:
      (a) From sowing to transplanting:
         (i) 1st crop: 30 days, (ii) 2nd crop: 20 days.
      (b) From transplanting to harvesting:
         (i) 1st crop: 122 days, (ii) 2nd crop: 97 days.

(VI) Agronomic characters:

1. Average height in cm: 103.1 (1st crop), 105.6 (2nd crop).
2. Average number of tillers: 15.2 (1st crop), 11.8 (2nd crop).
3. Straw strength: Non-lodged.
4. Shattering habit: Not likely to shatter.
5. Time of maturity: Late.
6. Pest resistance: Very resistant to rice blast disease.
7. Yield of paddy per hectare: 4,595 kg (1st crop), 4,045 kg (2nd crop).
8. Rice Quality: Medium in table quality.
9. Other morphological data:

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Taichung 171	green	reddish brown	yellow-ish green	light yellow	white	yellow-ish white	yellow	awnless	short	

Name of Variety

Taichung 172

(臺中 172號)

(I) **Type:** Kêng (粳) or Japonica.

(II) **Origin of the variety:** Taichung 114 + Taichung 116 → Taichung 153; Big panicle 1 + Great rice → Taichung yu 46; Taichung 153 + Taichung yu 46 → Taichung 172.

(III) **Breeding station:** Taichung District Agricultural Improvement Station.

(IV) **Period of breeding:**

1. **Year cross was made:** 1948.
2. **Year selected:** 1952.

(V) **Cultural characteristics:**

1. **Adaptation:** Better adapted to the Taichung, Nantou, and Changhua districts. Yielded well on a wide range of soil types.
2. **Growing period:**
   (1) **Time of sowing:**
      (a) **1st crop:** Late January,
      (b) **2nd crop:** Early July.
   (2) **Time of harvesting:**
      (a) **1st crop:** Late June,
      (b) **2nd crop:** Late October.
   (3) **Average number of growing days:**
      (a) **From sowing to transplanting:**
         (i) **1st crop:** 30 **days,** (ii) **2nd crop:** 20 **days.**
      (b) **From transplanting to harvesting:**
         (i) **1st crop:** 122 **days,** (ii) **2nd crop:** 95 **days.**

(VI) **Agronomic characters:**

1. **Average height in cm:** 106.1 (**1st crop**), 100.4 (**2nd crop**).
2. **Average number of tillers:** 18.4 (**1st crop**), 14.9 (**2nd crop**).
3. **Straw strength:** Lodged on very rich soil.
4. **Shattering habit:** Not likely to shatter.
5. **Time of maturity:** Late.
6. **Pest resistance:** Resistant to blast disease.
7. **Yield of paddy per hectare:** 4,862 **kg** (**1st crop**), 3,791 **kg** (**2nd crop**).
8. **Rice Quality:** Good in table quality.
9. **Other morphological data:**

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Taichung 172	deep green	purplish black	yellow-ish green	light yellow	yellow	reddish brown	reddish brown	awnless	short	

Name of Variety

Taichung 173

(臺中 173號)

(I) Type: Kêng (粳) or Japonica.

(II) Origin of the variety: Taichung special 6 × MIZUHO No. 9.

(III) Breeding station: Taichung District Agricultural Improvement Station.

(IV) Period of breeding:

1. Year cross was made: 1947.
2. Year selected: 1952.

(V) Cultural characteristics:

1. Adaptation: Adapted to the Taichung, Nantou, and Changhua areas. Yielded well on a wide range of soil types.
2. Growing period:
   (1) Time of sowing:
      (a) 1st crop: Late January,
      (b) 2nd crop: Early July.
   (2) Time of harvesting:
      (a) 1st crop: Late June,
      (b) 2nd crop: Late October.
   (3) Average number of growing days:
      (a) From sowing to transplanting:
         (i) 1st crop: 30 days, (ii) 2nd crop: 20 days.
      (b) From transplanting to harvesting:
         (i) 1st crop: 117 days, (ii) 2nd crop: 92 days.

(VI) Agronomic characters:

1. Average height in cm: 98.0 (1st crop), 87.9 (2nd crop).
2. Average number of tillers: 21.1 (1st crop), 13.3 (2nd crop).
3. Straw strength: Non-lodged.
4. Shattering habit: Not likely to shatter.
5. Time of maturity: Mid-season.
6. Pest resistance: Susceptible to blast disease.
7. Yield of paddy per hectare: 4,813 kg (1st crop), 3,691 kg (2nd crop).
8. Rice Quality: Medium in table quality.
9. Other morphological data:

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Taichung 173	green	yellow	yellow-ish green	light yellow	white	yellow-ish white	yellow	awnless	short	

Name of Variety

Taichung 176

(臺中 176號)

(I) Type: Kêng (粳) or Japonica.

(II) Origin of the variety: KAMEJI / SHINRIKI — Taichung 65 / Koozecorogoro (Mountain rice) — Taichung 176.

(III) Breeding station: Taichung District Agricultural Improvement Station.

(IV) Period of breeding:

1. Year cross was made: 1950.
2. Year selected: 1953.

(V) Cultural characteristics:

1. Adaptation: Better adapted to the Taichung, Changhua, Yunlin, and Nantou areas. Yielded well on a wide range of soil types, and with good irrigiation. Tolerated heavy fertilization.
2. Growing period:
   (1) Time of sowing:
      (a) 1st crop: Late January,
      (b) 2nd crop: Early July.
   (2) Time of harvesting:
      (a) 1st crop: Late June,
      (b) 2nd crop: Late October.
   (3) Average number of growing days:
      (a) From sowing to transplanting:
         (i) 1st crop: 30 days, (ii) 2nd crop: 20 days.
      (b) From transplanting to harvesting:
         (i) 1st crop: 123 days, (ii) 2nd crop: 97 days.

(VI) Agronomic characters:

1. Average height in cm: 108.0 (1st crop), 95.1 (2nd crop).
2. Average number of tillers: 15.7 (1st crop), 11.4 (2nd crop).
3. Straw strength: Stiff strawed.
4. Shattering habit: Not likely to shatter.
5. Time of maturity: Late.
6. Pest resistance: Resistant to blast disease.
7. Yield of paddy per hectare: 5,209 kg (1st crop), 4,288 kg (2nd crop).
8. Rice Quality: Good in table quality.
9. Other morphological data:

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Taichung 176	deep green	brown	yellow-ish green	light yellow	white	yellow-ish white	yellow	awnless	short	

Name of Variety

Taichung 178

(臺中 178號)

(I) **Type:** Kêng (粳) or Japonica.

(II) **Origin of the variety:** Standard O-LOO-NO × OMACHI; Taichung Special No. 2 × Taichung 65; Taichung glu. 46 × YOSHNO NO. 1; → Taichung 178.

(III) **Breeding station:** Taichung District Agricultural Improvement Station.

(IV) **Period of breeding:**

1. **Year cross was made:** 1950.
2. **Year selected:** 1952.

(V) **Cultural characteristics:**

1. **Adaptation:** Better adapted to the Taichung, Miaoli, Nantou, Changhua, and Yunlin areas, and especially to the region where rice blast disease is prevalent. Yielded well on a wide range of soil types. Tolerated heavy fertilization.
2. **Growing period:**
   (1) **Time of sowing:**
      (a) **1st crop:** Late January,
      (b) **2nd crop:** Early July.
   (2) **Time of harvesting:**
      (a) **1st crop:** Late June,
      (b) **2nd crop:** Late October.
   (3) **Average number of growing days:**
      (a) **From sowing to transplanting:**
         (i) **1st crop:** 30 days, (ii) **2nd crop:** 20 days.
      (b) **From transplanting to harvesting:**
         (i) **1st crop:** 119 days, (ii) **2nd crop:** 91 days.

(VI) **Agronomic characters:**

1. **Average height in cm:** 95.7 (1st crop), 95.4 (2nd crop).
2. **Average number of tillers:** 20.1 (1st crop), 13.8 (2nd crop).
3. **Straw strength:** Non-lodged.
4. **Shattering habit:** Not likely to shatter.
5. **Time of maturity:** Mid-season.
6. **Pest resistance:** Resistant to blast disease.
7. **Yield of paddy per hectare:** 4,986 kg (1st crop), 4,132 kg (2nd crop).
8. **Rice Quality:** Medium in table quality.
9. **Other morphological data:**

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Taichung 178	green	deep yellow	yellow-ish green	yellow	white	light yellow	light yellow	few, short awns	short	

Name of Variety

Taichung 179

(臺中 179號)

(I) Type: Kêng (粳) or Japonica.

(II) Origin of the variety:

Taichung 65 — I-kung-pao / NC 4 — Taichung 150 — Kwan-fu 401
Taichung 65 — K_2 / Tai-nung 45 — Kwan-fu 1
Taichung 150 × Kwan-fu 401 → Taichung 179.

(III) Breeding station: Taichung District Agricultural Improvement Station.

(IV) Period of breeding:

1. Year cross was made: 1950.
2. Year selected: 1953.

(V) Cultural characteristics:

1. Adaptation: Better adapted to the Taichung, Miaoli, Nantou, Changhua, and Yunlin areas, and especially to the regions where rice blast disease is prevalent. Yielded well on a wide range of soil types, and with good irrigation. Tolerated heavy fertilization.
2. Growing period:
   (1) Time of sowing:
      (a) 1st crop: Late January,
      (b) 2nd crop: Early July.
   (2) Time of harvesting:
      (a) 1st crop: Late June,
      (b) 2nd crop: Late October.
   (3) Average number of growing days:
      (a) From sowing to transplanting:
         (i) 1st crop: 30 days, (ii) 2nd crop: 20 days.
      (b) From transplanting to harvesting:
         (i) 1st crop: 123 days, (ii) 2nd crop: 96 days.

(VI) Agronomic characters:

1. Average height in cm: 108.5 (1st crop), 100.5 (2nd crop).
2. Average number of tillers: 17.7 (1st crop), 13.8 (2nd crop).
3. Straw strength: Non-lodged.
4. Shattering habit: Not likely to shatter.
5. Time of maturity: Late.
6. Pest resistance: Resistant to blast disease.
7. Yield of paddy per hectare: 4,919 kg (1st crop), 3,885 kg (2nd crop).
8. Rice Quality: Medium in table quality.
9. Other morphological data:

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Taichung 179	green	yellow	yellow-ish green	light yellow	white	yellow-ish white	yellow	few, medium awns	short	

Name of Variety

Taichung 180

(臺中 180號)

(I) Type: Kêng (粳) or Japonica.

(II) Origin of the variety: Selected from Taichung special No. 6.

(III) Breeding station: Taichung District Agricultural Improvement Station.

(IV) Period of breeding:

1. Year cross was made: ——
2. Year selected: 1952,

(V) Cultural characteristics:

1. Adaptation: Best adapted to the Taichung district. Yielded well on a wide range of soil types.
2. Growing period:
   (1) Time of sowing:
      (a) 1st crop: Late January,
      (b) 2nd crop: Early July.
   (2) Time of harvesting:
      (a) 1st crop: Mid-June,
      (b) 2nd crop: Mid-October.
   (3) Average number of growing days:
      (a) From sowing to transplanting:
         (i) 1st crop: 30 days, (ii) 2nd crop: 20 days.
      (b) From transplanting to harvesting:
         (i) 1st crop: 104 days, (ii) 2nd crop: 87 days.

(VI) Agronomic characters:

1. Average height in cm: 93.3 (1st crop), 93.7 (2nd crop).
2. Average number of tillers: 17.1 (1st crop), 13.2 (2nd crop).
3. Straw strength: Non-lodged.
4. Shattering habit: Easy to shatter.
5. Time of maturity: Early.
6. Pest resistance: Somewhat resistant to disease.
7. Yield of paddy per hectare: 3,898 kg (1st crop), 3,267 kg (2nd crop).
8. Rice Quality: Good in table quality.
9. Other morphological data:

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Taichung 180	green	yellow	yellow-ish green	lihgt yellow	white	yellow-ish white	yellow	few, short awns	short	

Name of Variety

Kwan-fu 401

(光復 401號)

(I) Type: Kêng (粳) or Japonica.

(II) Origin of the variety: (Taichung 65 × I-kung-pao) × (NC 4 × Taichung 65) — Taichung 150 — Kwan-fu 401.

(III) Breeding station: Taichung District Agricultural Improvement Station.

(IV) Period of breeding:

1. Year cross was made: 1940.
2. Year selected: 1944.

(V) Cultural characteristics:

1. Adaptation: Adapted to all rice regions of the province. Yielded well on a wide range of soil types, and with good irrigation. No great influence over yield if transplanted using old seedlings. Somewhat tolerated drought.
2. Growing period:
   (1) Time of sowing:
      (a) 1st crop: Late January,
      (b) 2nd crop: Early July.
   (2) Time of harvesting:
      (a) 1st crop: Late June,
      (b) 2nd crop: Late October.
   (3) Average number of growing days:
      (a) From sowing to transplanting:
         (i) 1st crop: 30 days, (ii) 2nd crop: 20 days.
      (b) From transplanting to harvesting:
         (i) 1st crop: 119 days, (ii) 2nd crop: 99 days.

(VI) Agronomic characters:

1. Average height in cm: 98.8 (1st crop), 100.2 (2nd crop).
2. Average number of tillers: 13.5 (1st crop), 12.1 (2nd crop).
3. Straw strength: Non-lodged.
4. Shattering habit: Extremely non-shattering habit.
5. Time of maturity: Mid-season.
6. Pest resistance: Weak resistance to diseases.
7. Yield of paddy per hectare: 4,760 kg (1st crop), 3,659 kg (2nd crop).
8. Rice Quality: Medium in table quality.
9. Other morphological data:

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Kwan-fu 401	green	yellow	yellow-ish green	light yellow	white	yellow-ish white	yellow	awnless	short	

Name of Variety

Taichung glu. 46

(臺中糯46號)

(I) **Type:** Glutinous (糯), Japonica.

(II) **Origin of the variety:** Standard O-LOO-NO-OMACHI / Taichung Special No. 2 / Taichung 65 — Taichung glu. 46.

(III) **Breeding station:** Taichung District Agricultural Improvement Station.

(IV) **Period of breeding:**

1. **Year cross was made:** 1926.
2. **Year selected:** 1931.

(V) **Cultural characteristics:**

1. **Adaptation:** Adapted to all the plain regions of the province.
2. **Growing period:**
   (1) **Time of sowing:**
      (a) **1st crop:** Late January,
      (b) **2nd crop:** Late June to early July.
   (2) **Time of harvesting:**
      (a) **1st crop:** Late June to early July,
      (b) **2nd crop:** Early November.
   (3) **Average number of growing days:**
      (a) **From sowing to transplanting:**
         (i) **1st crop:** 30 days, (ii) **2nd crop:** 20 days.
      (b) **From transplanting to harvesting:**
         (i) **1st crop:** 121 days, (ii) **2nd crop:** 96 days.

(VI) **Agronomic characters:**

1. **Average height in cm:** 89.9 (1st crop), 93.5 (2nd crop).
2. **Average number of tillers:** 17.8 (1st crop), 15.4 (2nd crop).
3. **Straw strength:** Lodged on very rich soil.
4. **Shattering habit:** Not likely to shatter.
5. **Time of maturity:** Mid-season.
6. **Pest resistance:** Somewhat resistant to disease.
7. **Yield of paddy per hectare:** 4,760 kg (1st crop), 3,973 kg (2nd crop).
8. **Rice Quality:** Excellent in table quality.
9. **Other morphological data:**

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Taichung glu. 46	light green	purplish black	yellowish green	light yellow	white	white	deep yellow	awnless	short	a glutinous rice variety

Name of Variety

Taichung Special No.6

(臺中特 6號)

(I) **Type:** Kêng (粳) or Japonica.

(II) **Origin of the variety:** Selected from YUBO-ASAHI.

(III) **Breeding station:** Taichung District Agricultural Improvement Station.

(IV) **Period of breeding:**

1. **Year cross was made:** ——
2. **Year selected:** 1924.

(V) **Cultural characteristics:**

1. **Adaptation:** Better adapted to the Taichung, Nantou, and Changhua areas having more bright days. Yielded well on a wide range of soil types, and with good irrigation.
2. **Growing period:**
   (1) **Time of sowing:**
      (a) **1st crop:** Late January,
      (b) **2nd crop:** Late June to early July.
   (2) **Time of harvesting:**
      (a) **1st crop:** Late June,
      (b) **2nd crop:** Mid to late October.
   (3) **Average number of growing days:**
      (a) **From sowing to transplanting:**
      (i) **1st crop:** 30 **days,** (ii) **2nd crop:** 20 **days.**
      (b) **From transplanting to harvesting:**
      (i) **1st crop:** 101 **days,** (ii) **2nd crop:** 82 **days.**

(VI) **Agronomic characters:**

1. **Average height in cm:** 83.9 (**1st crop**), 90.8 (**2nd crop**).
2. **Average number of tillers:** 18.6 (**1st crop**), 14.5 (**2nd crop**).
3. **Straw strength:** Non-lodged.
4. **Shattering habit:** Easy to shatter.
5. **Time of maturity:** Early.
6. **Pest resistance:** Susceptible to disease.
7. **Yield of paddy per hectare:** 3,693 **kg (1st crop),** 3,054 **kg (2nd crop).**
8. **Rice Quality:** Good in table quality.
9. **Other morphological data:**

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Taichung special No. 6	green	light yellow	yellow-ish green	yellow	white	white	light yellow	few, medium awns	short	

Name of Variety

Chia-nung 242

(嘉農 242號)

(I) Type: Kêng (粳) or Japonica.

(II) Origin of the variety: Hsinchu 4 / Taichung 150 / Taipei 7 / Tai-nung 45 — Chia-nung 242.

(III) Breeding station: Chiayi Branch Station, Chiayi, TARI.

(IV) Period of breeding:

1. Year cross was made: 1946.
2. Year selected: 1951.

(V) Cultural characteristics:

1. Adaptation: Adapted to all rice regions of the province, except in the Taipei, and Taoyuan areas as the 2nd crop. Yielded well on loam, sandy loam, and clayey loam soil with good irrigation. Prefer to have more bright days, and less strong wind during the growing period.
2. Growing period:
   (1) Time of sowing:
      (a) 1st crop: Early January,
      (b) 2nd crop: Early July.
   (2) Time of harvesting:
      (a) 1st crop: Early to mid-June,
      (b) 2nd crop: Late October.
   (3) Average number of growing days:
      (a) From sowing to transplanting:
         (i) 1st crop: 35–40 days, (ii) 2nd crop: 15–20 days.
      (b) From transplanting to harvesting:
         (i) 1st crop: 124 days, (ii) 2nd crop: 105 days.

(VI) Agronomic characters:

1. Average height in cm: 110.6 (1st crop), 110.6 (2nd crop).
2. Average number of tillers: 16.2 (1st crop), 12.2 (2nd crop).
3. Straw strength: Easy to lodge.
4. Shattering habit: Not likely to shatter.
5. Time of maturity: Late.
6. Pest resistance: Very resistant to rice blast, but susceptible to sclerotial disease.
7. Yield of paddy per hectare: 6,031 kg (1st crop), 4,732 kg (2nd crop).
8. Rice Quality: Medium in table quality.
9. Other morphological data:

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Chia-nung 242	green	light yellow	light green	light green	milky white	light yellow	light yellow	awnless	short	the most resistant variety to rice blast

Name of Variety

Chia-nan 2

(嘉南 2 號)

(I) Type: Kêng (粳) or Japonica.

(II) Origin of the variety: O-LOO-NO—MITSUI—Taichung 65—Chia-nan 2.

(III) Breeding station: Tainan District Agricultural Improvement Station.

(IV) Period of breeding:

1. Year cross was made: 1935.
2. Year selected: 1938.

(V) Cultural characteristics:

1. Adaptation: Adapted to the Yunlin, Chiayi, Tainan, Kaohsiung, Pintung, Taipei, and Taoyuan areas. Insensitive to photoperiod. Yielded well on loam, sandy loam, and clay soil with good irrigation. Withstand cold weather and strong wind.
2. Growing period:
   (1) Time of sowing:
      (a) 1st crop: Mid-January,
      (b) 2nd crop: Late June to early July.
   (2) Time of harvesting:
      (a) 1st crop: Early to mid-June,
      (b) 2nd crop: Late October to early November.
   (3) Average number of growing days:
      (a) From sowing to transplanting:
         (i) 1st crop: 30 days, (ii) 2nd crop: 14 days.
      (b) From transplanting to harvesting:
         (i) 1st crop: 126 days, (ii) 2nd crop: 106 days.

(VI) Agronomic characters:

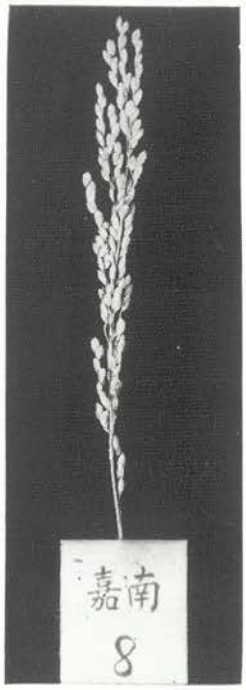
1. Average height in cm: 106.0 (1st crop), 98.0 (2nd crop).
2. Average number of tillers: 14.0 (1st crop), 13.5 (2nd crop).
3. Straw strength: Non-lodged.
4. Shattering habit: Not likely to shatter.
5. Time of maturity: Late.
6. Pest resistance: Disease resistance only fair.
7. Yield of paddy per hectare: 4,494 kg (1st crop), 3,564 kg (2nd crop).
8. Rice Quality: Medium in table quality.
9. Other morphological data:

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Chia-nan 2	deep green	deep brown	green	green	white	light brown	light brown	awnless	short	

Name of Variety

Chai-nan 8

(嘉南 8 號)



(I) Type: Kêng (粳) or Japonica.

(II) Origin of the variety: O-LOO-NO—MITSUI—Taichung 65—Nan-yu 183—Chia-nan 8.

(III) Breeding station: Tainan District Agricultural Improvement Station.

(IV) Period of breeding:

1. Year cross was made: 1935.
2. Year selected: 1938.

(V) Cultural characteristics:

1. Adaptation: Better adapted to the Yunlin, Chiayi, Kaohsiung, Pintung, Taitung, Hualian, Hsinchu, Taipei, and Keelung areas. Yielded well on loam, and sandy loam soil with good irrigation. Tolerated to salty soil, and heavy application of fertilizer. Useful for growing in coastal regions. Withstand strong wind. Insensitive to photoperiod.
2. Growing period:
   (1) Time of sowing:
      (a) 1st crop: Mid-January,
      (b) 2nd crop: Late June to early July.
   (2) Time of harvesting:
      (a) 1st crop: Early to mid-June,
      (b) 2nd crop: Late October to early November.
   (3) Average number of growing days:
      (a) From sowing to transplanting:
         (i) 1st crop: 30 days, (ii) 2nd crop: 14 days.
      (b) From transplanting to harvesting:
         (i) 1st crop: 125 days, (ii) 2nd crop: 106 days.

(VI) Agronomic characters:

1. Average height in cm: 99.0 (1st crop), 102.0 (2nd crop).
2. Average number of tillers: 14.3 (1st crop), 13.8 (2nd crop).
3. Straw strength: Non-lodged.
4. Shattering habit: Not likely to shatter.
5. Time of maturity: Late.
6. Pest resistance: Fairly resistant to disease.
7. Yield of paddy per hectare: 5,178 kg (1st crop), 4,215 kg (2nd crop).
8. Rice Quality: Medium in table quality.
9. Other morphological data:

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Chia-nan 8	green	light brown	green	green	white	light brown	light brown	awnless	short	

Name of Variety

Chia-nan 14

(嘉南 14 號)

(I) Type: Kêng (粳) or Japonica.

(II) Origin of the variety: (O-LOO-NO—MITSUI—Taichung 65)—Nan-yu 224—Chia-nan 14.

(III) Breeding station: Tainan District Agricultural Improvement Station.

(IV) Period of breeding:

1. Year cross was made: 1935.
2. Year selected: 1939.

(V) Cultural characteristics:

1. Adaptation: Better adapted to the Tainan, Chiayi, and Yunlin areas. Yielded well on loam, sandy loam, and clayey loam soil with good irrigation. Sensitive to photoperiod. Susceptible to cold weather and strong wind.
2. Growing period:
   (1) Time of sowing:
      (a) 1st crop: Mid-January,
      (b) 2nd crop: Early to late June.
   (2) Time of harvesting:
      (a) 1st crop: Early June,
      (b) 2nd crop: Mid to late October.
   (3) Average number of growing days:
      (a) From sowing to transplanting:
         (i) 1st crop: 30 days, (ii) 2nd crop: 14 days.
      (b) From transplanting to harvesting:
         (i) 1st crop: 115 days, (ii) 2nd crop: 96 days.

(VI) Agronomic characters:

1. Average height in cm: 97.0 (1st crop), 102.0 (2nd crop).
2. Average number of tillers: 16.0 (1st crop), 14.7 (2nd crop).
3. Straw strength: Non-lodged.
4. Shattering habit: Easy to shatter.
5. Time of maturity: Mid-season.
6. Pest resistance: Moderately resistant to diseases.
7. Yield of paddy per hectare: 4,800 kg (1st crop),4,086 kg (2nd crop).
8. Rice Quality: Good in table quality.
9. Other morphological data:

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Chia-nan 14	yellow-ish green	light yellow	yellow-ish green	yellow-ish green	white	light yellow	light yellow	few awns	short	

Name of Variety

Tainan 1

(臺南 1 號)

(I) Type: Kêng (粳) or Japonica.

(II) Origin of the Variety: Taichung 150 × Chia-nan 15.

(III) Breeding station: Tainan District Agricultural Improvement Station.

(IV) Period of breeding:

1. Year cross was made: 1942.
2. Year selected: 1952.

(V) Cultural characteristics:

1. Adaptation: Best adapted to the Tainan district. Yielded well on a wide variety of rich soils. Tolerated heavy application of fertilizer.
2. Growing period:
   (1) Time of sowing:
      (a) 1st crop: Mid to late January,
      (b) medium crop: Early June,
      (c) 2nd crop: Early to mid-July.
   (2) Time of harvesting:
      (a) 1st crop: Mid to late June,
      (b) medium crop: Mid to late September,
      (c) 2nd crop: Mid to late October.
   (3) Average number of growing days:
      (a) From sowing to Transplanting:
      (i) 1st crop: 30 days, (ii) medium crop: 15 days,
      (iii) 2nd crop: 15 days.
      (b) From Transplanting to harvesting:
      (i) 1st crop: 119 days, (ii) medium crop: 100 days,
      (iii) 2nd crop: 93 days.

(VI) Agronomic characters:

1. Average height in cm: 91.5 (1st crop), 105.7 (medium crop), 97.9 (2nd crop).
2. Average number of tillers: 15.0 (1st crop), 15.5 (medium crop), 10.0 (2nd crop).
3. Straw strength: Non-lodged.
4. Shattering habit: Not likely to shatter.
5. Time of maturity: Mid-season.
6. Pest resistance: Fairly resistant to diseases.
7. Yield of paddy per hectare: 4,957 kg (1st crop), 5,127 kg (medium crop), 3,694 kg (2nd crop).
8. Rice Quality: Medium in table quality.
9. Other morphological data:

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Tainan 1	green	light brown	green	green	white	light brown	light brown	awnless	short	

Name of Variety

Tainan 2

(臺南 2 號)

(I) Type: Kêng (粳) or Japonica.

(II) Origin of the Variety: Taichung 65 / O-LOO-NO-MITSUI — Nan-yu 183 — Tainan 2.

(III) Breeding station: Tainan District Agricultural Improvement Station.

(IV) Period of breeding:

1. Year cross was made: 1943.
2. Year selected: 1952.

(V) Cultural characteristics:

1. Adaptation: Adapted for growing in the Tainan district. Yielded well on a wide variety of rich soils. Tolerated heavy application of fertilizer.
2. Growing period:
   (1) Time of sowing:
      (a) 1st crop: Mid to late January,
      (b) medium crop: Early June,
      (c) 2nd crop: Early to mid-July.
   (2) Time of harvesting:
      (a) 1st crop: Mid to late June,
      (b) medium crop: Mid to late September,
      (c) 2nd crop: Mid to late October.
   (3) Average number of growing days:
      (a) From sowing to Transplanting:
         (i) 1st crop: 30 days, (ii) medium crop: 15 days,
         (iii) 2nd crop: 15 days.
      (b) From Transplanting to harvesting:
         (i) 1st crop: 119 days, (ii) medium crop: 103 days,
         (iii) 2nd crop: 93 days.

(VI) Agronomic characters:

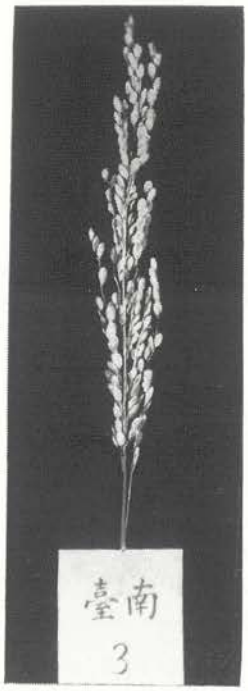
1. Average height in cm: 98.6 (1st crop), 102.9 (medium crop), 99.3 (2nd crop).
2. Average number of tillers: 17.0 (1st crop), 10.5 (medium crop), 13.0 (2nd crop).
3. Straw strength: Non-lodged.
4. Shattering habit: Not likely to shatter.
5. Time of maturity: Mid-season.
6. Pest resistance: Fairly resistant to diseases.
7. Yield of paddy per hectare: 4,868 kg (1st crop), 4,685 kg (medium crop), 3,590 kg (2nd crop).
8. Rice Quality: Medium in table quality.
9. Other morphological data:

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Tainan 2	green	light brown	green	green	white	light brown	light brown	awnless	short	

Name of Variety

Tainan 3

(臺南 3 號)



(I) Type: Kêng (粳) or Japonica.

(II) Origin of the Variety: Kwan-fu 401 / Kwan-fu 1 / Chia-nan 14 — Jun 38 — Tainan 3.

(III) Breeding station: Tainan District Agricultural Improvement Station.

(IV) Period of breeding:

1. Year cross was made: 1951.
2. Year selected: 1955.

(V) Cultural characteristics:

1. Adaptation: Adpated to the Tainan district. Suitable for growing on a wide variety of paddy soil types. Poor response to heavy manuring.
2. Growing period:
   (1) Time of sowing:
      (a) 1st crop: Mid to late January,
      (b) medium crop: Early June,
      (c) 2nd crop: Early to mid-July.
   (2) Time of harvesting:
      (a) 1st crop: Mid to late June,
      (b) medium crop: Mid to late September,
      (c) 2nd crop: Mid to late October.
   (3) Average number of growing days:
      (a) From sowing to Transplanting:
         (i) 1st crop: 30 days, (ii) medium crop: 15 days,
         (iii) 2nd crop: 15 days.
      (b) From Transplanting to harvesting:
         (i) 1st crop: 118 days, (ii) medium crop: 100 days,
         (iii) 2nd crop: 93 days.

(VI) Agronomic characters:

1. Average height in cm: 104.7 (1st crop), 108.4 (medium crop), 102.5 (2nd crop).
2. Average number of tillers: 20.0 (1st crop), 16.8 (medium crop), 14.0 (2nd crop).
3. Straw strength: Tend to lodge when grown on very rich soil.
4. Shattering habit: Not likely to shatter.
5. Time of maturity: Mid-season.
6. Pest resistance: Fairly resistant to diseases.
7. Yield of paddy per hectare: 5,940 kg (1st crop), 5,223 kg (medium crop), 3,589 kg (2nd crop).
8. Rice Quality: Medium in table quality.
9. Other morphological data:

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Tainan 3	light green	light yellow	light green	light green	white	light yellow	light yellow	few, short awns	short	

Name of Variety

Kaohsiung 10

(高雄 10 號)

(I) Type: Kêng (粳) or Japonica.

(II) Origin of the variety: Improved AIKOKU / TAKENARI / KINAI-NAKASE — Kaohsiung 6 — Kaohsiung 10.

(III) Breeding station: Kaohsiung District Agricultural Impovement Station.

(IV) Period of breeding:

1. Year cross was made: 1930.
2. Year selected: 1933.

(V) Cultural characteristics:

1. Adaptation: Adapted to the areas from Taichung to Pintung. Yielded well on loam, sandy loam, and clay soil with good irrigation. Tolerated heavy application of fertilizer.
2. Growing period:
   (1) Time of sowing:
      (a) 1st crop: Early to late December,
      (b) 2nd crop: Mid-June.
   (2) Time of harvesting:
      (a) 1st crop: Mid-May,
      (b) 2nd crop: Mid-October.
   (3) Average number of growing days:
      (a) From sowing to transplanting:
         (i) 1st crop: 23 days, (ii) 2nd crop: 23 days.
      (b) From transplanting to harvesting:
         (i) 1st crop: 118 days, (ii) 2nd crop: 100 days.

(VI) Agronomic characters:

1. Average height in cm: 93.6 (1st crop), 102.3 (2nd crop).
2. Average number of tillers: 17.0 (1st crop), 12.9 (2nd crop).
3. Straw strength: Non-lodged.
4. Shattering habit: Not likely to shatter.
5. Time of maturity: Mid-season.
6. Pest resistance: Fairly resistant to diseases.
7. Yield of paddy per hectare: 4,020 kg (1st crop), 3,157 kg (2nd crop).
8. Rice Quality: Good in table quality.
9. Other morphological data:

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Kaohsiung 10	light green	reddish brown	light yellow	green	white	light yellow	light yellow	few, short awns	short	

Name of Variety

Kaohsiung 18

(高雄 18 號)

(I) **Type:** Kêng (粳) or Japonica.

(II) **Origin of the variety:** (Improved AIKOKU × Kaohsiung 6) × (Taichung 65 × NC 4) → Kaohsiung 10 × Taichung 114 → Kaohsiung 18

(III) **Breeding station:** Kaohsiung District Agricultural Improvement Station.

(IV) **Period of breeding:**

1. **Year cross was made:** 1939.
2. **Year selected:** 1941.

(V) **Cultural characteristics:**

1. **Adaptation:** Adapted to the areas from Taichung to Pintung. Yielded well on loam, sandy loam, and clay soil, and under high temperature and abundant rainfall. Tolerated heavy fertilization.
2. **Growing period:**
   (1) **Time of sowing:**
      (a) **1st crop:** Early to late December,
      (b) **2nd crop:** Mid-June.
   (2) **Time of harvesting:**
      (a) **1st crop:** Mid-May,
      (b) **2nd crop:** Mid-October.
   (3) **Average number of growing days:**
      (a) **From sowing to transplanting:**
         (i) **1st crop:** 24 days, (ii) **2nd crop:** 23 days.
      (b) **From transplanting to harvesting:**
         (i) **1st crop:** 120 days, (ii) **2nd crop:** 100 days.

(VI) **Agronomic characters:**

1. **Average height in cm:** 97.7 (1st crop), 110.6 (2nd crop).
2. **Average number of tillers:** 16.1 (1st crop), 11.7 (2nd crop).
3. **Straw strength:** Non-lodged.
4. **Shattering habit:** Not likely to shatter.
5. **Time of maturity:** Mid-season.
6. **Pest resistance:** Fairly resistant to rice blast and sheath rot.
7. **Yield of paddy per hectare:** 4,780 kg (1st crop), 3,854 kg (2nd crop).
8. **Rice Quality:** Good in table quality.
9. **Other morphological data:**

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Kaohsiung 18	light green	light yellow	light yellow	green	white	light yellow	light yellow	few, short awns	short	

Name of Variety

Kaohsiung 22

(高雄 22 號)

(I) Type: Kêng (粳) or Japonica.

(II) Origin of the variety: (Kaohsiung 10 — Taichung 114) — Kaohsiung 18; (Taichung 114 — MEIJI-NISHIKI) — Taichung 158; (Kaohsiung 18 — Taichung 158) — Kaohsiung 22.

(III) Breeding station: Kaohsiung District Agricultural Improvement Station.

(IV) Period of breeding:

1. Year cross was made: 1946.
2. Year selected: 1949.

(V) Cultural characteristics:

1. Adaptation: Adapted to the areas from Hsinchu to Pintung. Yielded well on loam, sandy loam, and clay soil with good irrigation, and under high temperature. Tolerated heavy application of fertilizer.
2. Growing period:
   (1) Time of sowing:
      (a) 1st crop: Early to mid-December,
      (b) 2nd crop: Mid-June.
   (2) Time of harvesting:
      (a) 1st crop: Mid-May,
      (b) 2nd crop: Mid-October.
   (3) Average number of growing days:
      (a) From sowing to transplanting:
         (i) 1st crop: 28 days, (ii) 2nd crop: 23 days.
      (b) From transplanting to harvesting:
         (i) 1st crop: 122 days, (ii) 2nd crop: 101 days.

(VI) Agronomic characters:

1. Average height in cm: 93.3 (1st crop), 102.4 (2nd crop).
2. Average number of tillers: 16.2 (1st crop), 12.5 (2nd crop).
3. Straw strength: Non-lodged.
4. Shattering habit: Not likely to shatter.
5. Time of maturity: Mid-season.
6. Pest resistance: Fairly resistant to rice blast disease.
7. Yield of paddy per hectare: 5,070 kg (1st crop), 4,023 kg (2nd crop).
8. Rice Quality: Good in table quality.
9. Other morphological data:

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Kaohsiung 22	light green	light yellow	light yellow	green	white	light yellow	light yellow	awnless	short	

Name of Variety

Kaohsiung 24

(高雄 24 號)

(I) Type: Kêng (粳) or Japonica.

(II) Origin of the variety: (Kaohsiung 10 × Taichung 114) × Kaohsiung 18 — (Taichung 114 × MEIJI-NISHIKI) × Taichung 158 — Kaohsiung 24.

(III) Breeding station: Kaohsiung District Agricultural Improvement Station.

(IV) Period of breeding:

1. Year cross was made: 1946.
2. Year selected: 1949.

(V) Cultural characteristics:

1. Adaptation: Better adapted to the Yunlin, Chiayi, Tainan, Kaohsiung, and Pintung areas. Yielded well on loam, sandy loam, and clay soil with good irrigation, and under abundant rainfall and sunlight. Tolerated heavy application of fertilizer.
2. Growing period:
   (1) Time of sowing:
      (a) 1st crop: Early to mid-December,
      (b) 2nd crop: Mid-June.
   (2) Time of harvesting:
      (a) 1st crop: Mid-May,
      (b) 2nd crop: Mid-October.
   (3) Average number of growing days:
      (a) From sowing to transplanting:
         (i) 1st crop: 28 days, (ii) 2nd crop: 23 days.
      (b) From transplanting to harvesting:
         (i) 1st crop: 121 days, (ii) 2nd crop: 101 days.

(VI) Agronomic characters:

1. Average height in cm: 98.2 (1st crop), 108.0 (2nd crop).
2. Average number of tillers: 17.0 (1st crop), 11.8 (2nd crop).
3. Straw strength: Non-lodged.
4. Shattering habit: Not likely to shatter.
5. Time of maturity: Mid-season.
6. Pest resistance: Susceptible to rice blast, but resistant to sheath rot.
7. Yield of paddy per hectare: 4,884 kg (1st crop), 4,210 kg (2nd crop).
8. Rice Quality: Good in table quality.
9. Other morphological data:

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Kaohsiung 24	light green	light yellow	light yellow	green	white	light yellow	light yellow	awnless	short	

Name of Variety

Kaohsiung 27

(高雄 27 號)

(I) Type: Kêng (粳) or Japonica.

(II) Origin of the variety: O-LOO-NO × MITSUI—Taichung 65—Chia-nan 3—Kaohsiung 10—Taichung 114—Kaohsiung 18—Kaohsiung 27.

(III) Breeding station: Kaohsiung District Agricultural Improvement Station.

(IV) Period of breeding:

1. Year cross was made: 1946.
2. Year selected: 1949.

(V) Cultural characteristics:

1. Adaptation: Widely adapted for growing in all regions of the province. Yielded well on loam, sandy loam, and clay soil with good irrigation, and under abundant rainfall and sunlight. Tolerated heavy application of fertilizer.
2. Growing period:
   (1) Time of sowing:
      (a) 1st crop: Early to mid-December,
      (b) 2nd crop: Mid-June.
   (2) Time of harvesting:
      (a) 1st crop: Mid-May,
      (b) 2nd crop: Mid-October.
   (3) Average number of growing days:
      (a) From sowing to transplanting:
         (i) 1st crop: 28 days, (ii) 2nd crop: 23 days.
      (b) From transplanting to harvesting:
         (i) 1st crop: 121 days, (ii) 2nd crop: 101 days.

(VI) Agronomic characters:

1. Average height in cm: 92.8 (1st crop), 102.2 (2nd crop).
2. Average number of tillers: 16.2 (1st crop), 12.8 (2nd crop).
3. Straw strength: Non-lodged.
4. Shattering habit: Not likely to shatter.
5. Time of maturity: Mid-season.
6. Pest resistance: Resistant to rice blast disease.
7. Yield of paddy per hectare: 4,931 kg (1st crop), 3,957 kg (2nd crop).
8. Rice Quality: Good in table quality.
9. Other morphological data:

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Kaohsiung 27	light green	light yellow	light yellow	green	white	light yellow	light yellow	awnless	short	

Name of Variety

Kaohsiung 41

(高雄 41 號)

(I) **Type:** Kêng (粳) or Japonica.

(II) **Origin of the variety:** (Kaohsiung 10 × Taichung 114) × Kaohsiung 18 — (Taichung 114 × Taichung 116) × Taichung 153 — Kaohsiung 41.

(III) **Breeding station:** Kaohsiung District Agricultural Improvement Station.

(IV) **Period of breeding:**

1. **Year cross was made:** 1948.
2. **Year selected:** 1950.

(V) **Cultural characteristics:**

1. **Adaptation:** Adapted to the Tainan, Chiayi, Kaohsiung, and Pintung areas. Yielded well on loam, sandy loam, and clay soil with good irrigation, and under abundant rainfall and sunlight. Tolerated heavy application of fertilizer.
2. **Growing period:**
   (1) **Time of sowing:**
      (a) **1st crop:** Early to mid-December,
      (b) **2nd crop:** Mid-June.
   (2) **Time of harvesting:**
      (a) **1st crop:** Mid-May,
      (b) **2nd crop:** Mid-October.
   (3) **Average number of growing days:**
      (a) **From sowing to transplanting:**
         (i) **1st crop:** 28 **days,** (ii) **2nd crop:** 23 **days.**
      (b) **From transplanting to harvesting:**
         (i) **1st crop:** 118 **days,** (ii) **2nd crop:** 98 **days.**

(VI) **Agronomic characters:**

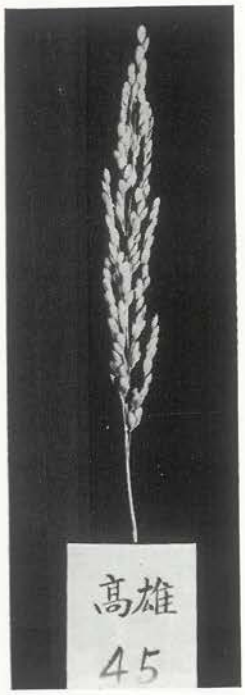
1. **Average height in cm:** 102.6 (**1st crop**), 110.4 (**2nd crop**).
2. **Average number of tillers:** 16.8 (**1st crop**), 11.5 (**2nd crop**).
3. **Straw strength:** Non-lodged.
4. **Shattering habit:** Not likely to shatter.
5. **Time of maturity:** Mid-season.
6. **Pest resistance:** Resistant to rice blast.
7. **Yield of paddy per hectare:** 5,156 **kg** (**1st crop**), 4,106 **kg** (**2nd crop**).
8. **Rice Quality:** Good in table quality.
9. **Other morphological data:**

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Kaohsiung 41	light green	light yellow	light yellow	green	white	light yellow	light yellow	awnless	short	

Name of Variety

Kaohsiung 45

(高雄 45 號)



(I) **Type:** Kêng (粳) or Japonica.

(II) **Origin of the variety:** (Taichung 65 × I-kung-pao) × Taichung 150 = Kwan-fu 401; Kaohsiung 10 × Taichung 114 = Kaohsiung 18; Kwan-fu 401 × Kaohsiung 18 = Kaohsiung 45.

(III) **Breeding station:** Kaohsiung District Agricultural Improvement Station.

(IV) **Period of breeding:**

1. **Year cross was made:** 1948.
2. **Year selected:** 1951.

(V) **Cultural characteristics:**

1. **Adaptation:** Better adapted to the Chiayi, Tainan, Kaohsiung, and Pintung areas. Yielded well on loam, sandy loam, and clay soil with good irrigation, and under abundant rainfall and sunlight. Tolerated heavy application of fertilizer.
2. **Growing period:**
   (1) **Time of sowing:**
   (a) **1st crop:** Early to mid-December,
   (b) **2nd crop:** Mid-June.
   (2) **Time of harvesting:**
   (a) **1st crop:** Mid-May,
   (b) **2nd crop:** Mid-October.
   (3) **Average number of growing days:**
   (a) **From sowing to transplanting:**
   (i) **1st crop:** 28 **days,** (ii) **2nd crop:** 23 **days.**
   (b) **From transplanting to harvesting:**
   (i) **1st crop:** 123 **days,** (ii) **2nd crop:** 97 **days.**

(VI) **Agronomic characters:**

1. **Average height in cm:** 115.9 (**1st crop**), 101.6 (**2nd crop**).
2. **Average number of tillers:** 15.3 (**1st crop**), 11.2 (**2nd crop**).
3. **Straw strength:** Non-lodged.
4. **Shattering habit:** Not likely to shatter.
5. **Time of maturity:** Mid-season.
6. **Pest resistance:** Resistant to disease.
7. **Yield of paddy per hectare:** 5,149 **kg** (**1st crop**), 4,067**kg** (**2nd crop**).
8. **Rice Quality:** Good in table quality.
9. **Other morphological data:**

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Kaohsiung 45	light green	light yellow	light yellow	green	white	light yellow	light yellow	awnless	short	

Name of Variety

Kaohsiung 53

(高雄 53 號)

(I) Type: Kêng (粳) or Japonica.

(II) Origin of the variety: (Taichung 65 × I-kung-pao) × (Taichung 150 × KAMEJI) = Kwan-fu 401; (SHINRIKI × Taichung 65) = Kaohsiung 53.

(III) Breeding station: Kaohsiung District Agricultural Improvement Station.

(IV) Period of breeding:

1. Year cross was made: 1949.
2. Year selected: 1951.

(V) Cultural characteristics:

1. Adaptation: Adapted to the Chiayi, Tainan, Kaohsiung and Pintung areas. Yielded well on loam, sandy loam and clay soil with good irrigation, and under abundant rainfall and sunlight. Tolerated heavy application of fertilizer.
2. Growing period:
   (1) Time of sowing:
      (a) 1st crop: Early to mid-December,
      (b) 2nd crop: Mid-June.
   (2) Time of harvesting:
      (a) 1st crop: Mid-May,
      (b) 2nd crop: Mid-October.
   (3) Average number of growing days:
      (a) From sowing to transplanting:
         (i) 1st crop: 28 days, (ii) 2nd crop: 23 days.
      (b) From transplanting to harvesting:
         (i) 1st crop: 122 days, (ii) 2nd crop: 97 days.

(VI) Agronomic characters:

1. Average height in cm: 101.6 (1st crop), 107.5 (2nd crop).
2. Average number of tillers: 16.2 (1st crop), 11.8 (2nd crop).
3. Straw strength: Non-lodged.
4. Shattering habit: Not likely to shatter.
5. Time of maturity: Mid-season.
6. Pest resistance: Resistant to rice blast.
7. Yield of paddy per hectare: 5,223 kg (1st crop), 4,507 kg (2nd crop).
8. Rice Quality: Good in table quality.
9. Other morphological data:

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Kaohsiung 53	light green	reddish brown	light yellow	green	white	light yellow	light yellow	awnless	short	

Name of Variety

Kaohsiung 64

(高雄 64 號)

(I) Type: Kêng (粳) or Japonica.

(II) Origin of the variety: Kaohsiung 22 × Kaohsiung 18.

(III) Breeding station: Kaohsiung District Agricultural Improvement Station.

(IV) Period of breeding:

1. Year cross was made: 1950.
2. Year selected: 1953.

(V) Cultural characteristics:

1. Adaptation: Best adapted for growing in the Kaohsiung district. Yielded well on loam, sandy loam, and clay soil with good irrigation, and under abundant rainfall and sunlight. Tolerated heavy application of fertilizer.
2. Growing period:

(1) Time of sowing:

(a) 1st crop: Early to mid December,

(b) 2nd crop: Mid-June.

(2) Time of harvesting:

(a) 1st crop: Mid-May,

(b) 2nd crop: Mid-October.

(3) Average number of growing days:

(a) From sowing to transplanting:

(i) 1st crop: 30 days, (ii) 2nd crop: 25 days.

(b) From transplanting to harvesting:

(i) 1st crop: 124 days, (ii) 2nd crop: 97 days.

(VI) Agronomic characters:

1. Average height in cm: 96.6 (1st crop), 116.6 (2nd crop).
2. Average number of tillers: 13.8 (1st crop), 9.5 (2nd crop).
3. Straw strength: Non-lodged.
4. Shattering habit: Not likely to shatter.
5. Time of maturity: Late.
6. Pest resistance: Resistant to disease.
7. Yield of paddy per hectare: 5,433 kg (1st crop), 4,085 kg (2nd crop).
8. Rice Quality: Medium in table quality.
9. Other morphological data:

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Kaohsiung 64	deep green	light yellow	blue green	green	white	white	light yellow	awnless	short	

Name of Variety

Kaohsiung 68

(高雄 68 號)

(I) **Type:** Kêng (粳) or Japonica.

(II) **Origin of the variety:** Chia-nan 2 / Ladany Pae-boe-boe / Kaohsiung 18 —Kaohsiung 68.

(III) **Breeding station:** Kaohsiung District Agricultural Improvement Station.

(IV) **Period of breeding:**

1. **Year cross was made:** 1950.
2. **Year selected:** 1953.

(V) **Cultural characteristics:**

1. **Adaptation:** Best adapted for growing in the Kaohsiung district. Yielded well on loam, sandy loam, and clay soil, and under abundant rainfall and sunlight. Tolerated heavy application of fertilizer.
2. **Growing period:**
   (1) **Time of sowing:**
      (a) **1st crop:** Early to mid-December,
      (b) **2nd crop:** Mid-June.
   (2) **Time of harvesting:**
      (a) **1st crop:** Mid-May,
      (b) **2nd crop:** Mid-October.
   (3) **Average number of growing days:**
      (a) **From sowing to transplanting:**
         (i) **1st crop:** 30 days, (ii) **2nd crop:** 25 days.
      (b) **From transplanting to harvesting:**
         (i) **1st crop:** 124 days, (ii) **2nd crop:** 98 days.

(VI) **Agronomic characters:**

1. **Average height in cm:** 101.3 (1st crop), 112.3 (2nd crop).
2. **Average number of tillers:** 13.1 (1st crop), 9.9 (2nd crop).
3. **Straw strength:** Stiff-strawed.
4. **Shattering habit:** Not likely to shatter.
5. **Time of maturity:** Late.
6. **Pest resistance:** Resistant to disease.
7. **Yield of paddy per hectare:** 5,435 kg (1st crop), 4,009 kg (2nd crop).
8. **Rice Quality:** Good in table quality.
9. **Other morphological data:**

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Kaohsiung 68	light green	light yellow	light green	green	white	white	light yellow	awnless	short	

Name of Variety

YOSHINO No. 1

（吉野 1 號）

(I) Type: Kêng (粳) or Japonica.

(II) Origin of the variety: Introduced from Japan.

(III) Breeding station: Hualian District Agricultural Improvement Station.

(IV) Period of breeding:

1. Year cross was made: ——
2. Year selected: 1941.

(V) Cultural characteristics:

1. Adaptation: Best adapted for growing in the Hualian district. Yielded well on loam and clay soil with good irrigation, and under abundant sunlight. Not suitable for growing on very rich soil.
2. Growing period:
   (1) Time of sowing:
      (a) 1st crop: Late January,
      (b) 2nd crop: Mid-June.
   (2) Time of harvesting:
      (a) 1st crop: Late June,
      (b) 2nd crop: Early November.
   (3) Average number of growing days:
      (a) From sowing to transplanting:
         (i) 1st crop: 28 days, (ii) 2nd crop: 13 days.
      (b) From transplanting to harvesting:
         (i) 1st crop: 112 days, (ii) 2nd crop: 92 days.

(VI) Agronomic characters:

1. Average height in cm: 106.0 (1st crop), 96.9 (2nd crop).
2. Average number of tillers: 8.6 (1st crop), 9.9 (2nd crop).
3. Straw strength: Non-lodged.
4. Shattering habit: Not likely to shatter.
5. Time of maturity: Mid-season.
6. Pest resistance: Susceptible to rice blast.
7. Yield of paddy per hectare: 3,805 kg (1st crop), 2,857kg (2nd crop).
8. Rice Quality: Better in table quality.
9. Other morphological data:

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
YOSHINO No. 1	light green	light yellow	green	green	white	light yellow	light yellow	awnless	short	

Name of Variety

Hualian 5

(花蓮 5 號)

(I) Type: Kêng (粳) or Japonica.

(II) Origin of the variety: From cross breeding.

(III) Breeding station: Hualian District Agricultural Improvement Station.

(IV) Period of breeding:

1. Year cross was made: about in 1942.
2. Year selected: 1946.

(V) Cultural characteristics:

1. Adaptation: Best adapted for growing in the Hualian district. Yielded well on rice paddy field with good irrigation, and under abundant sunlight, rainfall, and high temperature. Tolerated heavy application of fertilizer.
2. Growing period:
   (1) Time of sowing:
      (a) 1st crop: Late-January,
      (b) 2nd crop: Early July.
   (2) Time of harvesting:
      (a) 1st crop: Late June,
      (b) 2nd crop: Early November.
   (3) Average number of growing days:
      (a) From sowing to transplanting:
         (i) 1st crop: 30 days, (ii) 2nd crop: 15 days.
      (b) From transplanting to harvesting:
         (i) 1st crop: 123 days, (ii) 2nd crop: 98 days.

(VI) Agronomic characters:

1. Average height in cm: 99.8 (1st crop), 97.9 (2nd crop).
2. Average number of tillers: 16.3 (1st crop), 13.6 (2nd crop).
3. Straw strength: Non-lodged.
4. Shattering habit: Not likely to shatter.
5. Time of maturity: Late.
6. Pest resistance: Resistant to disease.
7. Yield of paddy per hectare: 4,320kg (1st crop), 4,400kg (2nd crop).
8. Rice Quality: Good in table quality.
9. Other morphological data:

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Hualian 5	deep green	purplish black	green	green	white	light green	light yellow	few, short awns	short	

Name of Variety

Hualian 17

(花蓮 17 號)

(I) Type: Kêng (粳) or Japonica.

(II) Origin of the variety: From cross breeding.

(III) Breeding station: Hualian District Agricultural Improvement Station.

(IV) Period of breeding:

1. Year cross was made: about in 1942.
2. Year selected: 1946.

(V) Cultural characteristics:

1. Adaptation: Best adapted for growing in the northern region of Hualian. Yielded well on rice paddies with good irrigation, and under high temperature, sufficient sunlight and rainfall. Poor response to very rich soil.
2. Growing period:
   (1) Time of sowing:
      (a) 1st crop: Late January,
      (b) 2nd crop: Early July.
   (2) Time of harvesting:
      (a) 1st crop: Late June,
      (b) 2nd crop: Late October.
   (3) Average number of growing days:
      (a) From sowing to transplanting:
         (i) 1st crop: 30 days, (ii) 2nd crop: 15 days.
      (b) From transplanting to harvesting:
         (i) 1st crop: 115 days, (ii) 2nd crop: 93 days.

(VI) Agronomic characters:

1. Average height in cm: 102.6 (1st crop), 99.4 (2nd crop).
2. Average number of tillers: 17.1 (1st crop), 11.2 (2nd crop).
3. Straw strength: Non-lodged.
4. Shattering habit: Not likely to shatter.
5. Time of maturity: Mid-season.
6. Pest resistance: Susceptible to diseases.
7. Yield of paddy per hectare: 4,700kg (1st crop), 4,000kg (2nd crop).
8. Rice Quality: Medium in table quality.
9. Other morphological data:

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Hualian 17	light green	purplish black	green	green	white	light brown	reddish brown	awnless	short	

Name of Variety

Taitung 1

(臺東 1 號)

(I) **Type:** Kêng (粳) or Japonica.

(II) **Origin of the variety:** Taipei 8 × Chia-nan 2.

(III) **Breeding station:** Taitung District Agricultural Improvement Station.

(IV) **Period of breeding:**

1. **Year cross was made:** 1949.
2. **Year selected:** 1951.

(V) **Cultural characteristics:**

1. **Adaptation:** Best adapted for growing along the coast of the Taitung district. Yielded well on loam or sandy loam soil with good irrigation. Good response to heavy fertilization.
2. **Growing period:**
   (1) **Time of sowing:**
      (a) **1st crop:** Early January,
      (b) **2nd crop:** Early July.
   (2) **Time of harvesting:**
      (a) **1st crop:** Mid-June,
      (b) **2nd crop:** Mid-November.
   (3) **Average number of growing days:**
      (a) **From sowing to transplanting:**
         (i) **1st crop:** 32 days, (ii) **2nd crop:** 21 days.
      (b) **From transplanting to harvesting:**
         (i) **1st crop:** 114 days, (ii) **2nd crop:** 94 days.

(VI) **Agronomic characters:**

1. **Average height in cm:** 115.6 (1st crop), 116.3 (2nd crop).
2. **Average number of tillers:** 15.7 (1st crop), 16.5 (2nd crop).
3. **Straw strength:** Non-lodged.
4. **Shattering habit:** Not likely to shatter.
5. **Time of maturity:** Mid-season.
6. **Pest resistance:** Resistant to disease.
7. **Yield of paddy per hectare:** 5,552kg (1st crop), 4,079kg (2nd crop).
8. **Rice Quality:** Medium in table quality.
9. **Other morphological data:**

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Taitung 1	green	light yellow	green	green	white	light yellow	light yellow	awnless	short	with large and compact panicle

Name of Variety

Taitung 16

(臺東 16 號)

(I) **Type:** Kêng (粳) or Japonica.

(II) **Origin of the variety:** Kwan-fu 401 × Chia-nan 2.

(III) **Breeding station:** Taitung District Agricultural Improvement Station.

(IV) **Period of breeding:**

1. **Year cross was made:** 1949.
2. **Year selected:** 1951.

(V) **Cultural characteristics:**

1. **Adaptation:** Best adapted for growing along the eastern plain of the Taitung district. Yielded well on loam, and sandy loam soil.
2. **Growing period:**

(1) **Time of sowing:**

(a) **1st crop:** Early January,

(b) **2nd crop:** Early July.

(2) **Time of harvesting:**

(a) **1st crop:** Mid-June,

(b) **2nd crop:** Early November.

(3) **Average number of growing days:**

(a) **From sowing to transplanting:**

(i) **1st crop:** 32 **days,** (ii) **2nd crop:** 21 **days.**

(b) **From transplanting to harvesting:**

(i) **1st crop:** 112 **days,** (ii) **2nd crop:** 92 **days.**

(VI) Agronomic characters:

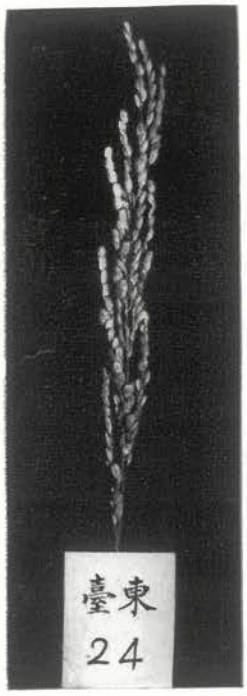
1. Average height in cm: 99.9 (1st crop), 104.1 (2nd crop).
2. Average number of tillers: 16.6 (1st crop), 18.2 (2nd crop).
3. Straw strength: Non-lodged.
4. Shattering habit: Easy to shatter.
5. Time of maturity: Mid-season.
6. Pest resistance: Resistant to blast disease.
7. Yield of paddy per hectare: 5,659 kg (1st crop), 4,920 kg (2nd crop).
8. Rice Quality: Medium in table quality.
9. Other morphological data:

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Taitung 16	green	light yellow	green	green	white	light yellow	light yellow	awnless	short	

Name of Variety

Taitung 24

(臺東 24 號)



(I) Type: Kêng (粳) or Japonica.

(II) Origin of the variety: YOSHINO No. 1 × Kwan-fu 401.

(III) Breeding station: Taitung District Agricultural Improvement Station.

(IV) Period of breeding:

1. Year cross was made: 1949.
2. Year selected: 1951.

(V) Cultural characteristics:

1. Adaptation: Best adapted for growing along the eastern plain of the Taitung district. Yielded well on loam and sandy loam soil with rich fertility.
2. Growing period:
   (1) Time of sowing:
      (a) 1st crop: Early January,
      (b) 2nd crop: Early July.
   (2) Time of harvesting:
      (a) 1st crop: Early June,
      (b) 2nd crop: Late October.
   (3) Average number of growing days:
      (a) From sowing to transplanting:
         (i) 1st crop: 32 days, (ii) 2nd crop: 21 days.
      (b) From transplanting to harvesting:
         (i) 1st crop: 102 days, (ii) 2nd crop: 83 days.

(VI) Agronomic characters:

1. Average height in cm: 95.6 (1st crop), 107.7 (2nd crop).
2. Average number of tillers: 16.1 (1st crop), 15.8 (2nd crop).
3. Straw strength: Non-lodged.
4. Shattering habit: Not likely to shatter.
5. Time of maturity: Mid-season.
6. Pest resistance: Resistant to blast disease.
7. Yield of paddy per hectare: 4,968 kg (1st crop), 4,445 kg (2nd crop).
8. Rice Quality: Good in table quality.
9. Other morphological data:

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Taitung 24	green	light yellow	green	green	white	light yellow	light yellow	awnless	short	with compact panicles & big grains

Name of Variety

Bir-me-fen

(白米粉)

(I) Type: Sen (籼) or Indica.

(II) Origin of the variety: Introduced from Fukien or Kwangtung province several hundred years ago.

(III) Breeding station: Taiwan Agricultural Research Institute.

(IV) Period of breeding:

1. Year cross was made: ——
2. Year selected: Certified in the process of official sanction of the native rice varieties in 1901–1920.

(V) Cultural characteristics:

1. Adaptation: Adapted to the I-lan, Taipei, Taoyuan, Hsinchu, Miao-li, Taichung, Changhua, Nantou, Yunlin, Chiayi, Pintung, Taitung, and Hualian areas. Yielded well on less fertile soil, and suitable for growing as the 1st crop. Withstand adverse environments.
2. Growing period:
   (1) Time of sowing:
      (a) 1st crop: Late January,
      (b) 2nd crop: ——
   (2) Time of harvesting:
      (a) 1st crop: Mid-July,
      (b) 2nd crop: ——
   (3) Average number of growing days:
      (a) From sowing to transplanting:
         (i) 1st crop: 42 days, (ii) 2nd crop: —— days.
      (b) From transplanting to harvesting:
         (i) 1st crop: 118 days, (ii) 2nd crop: —— days.

(VI) Agronomic characters:

1. Average height in cm: 112.3 (1st crop), —— (2nd crop).
2. Average number of tillers: 8.8 (1st crop), —— (2nd crop).
3. Straw strength: Lodged on very rich soil.
4. Shattering habit: Relatively easy to shatter.
5. Time of maturity: Mid-season.
6. Pest resistance: Very resistant to blast disease.
7. Yield of paddy per hectare: 3,803 kg (1st crop), —— kg (2nd crop).
8. Rice Quality: Ordinary in table quality.
9. Other morphological data:

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Bir-me-fen	light green	light yellow	green	green	white	light yellow	light brown	awnless	medium	tiller freely

Name of Variety

Tsai-yuan-thon

(菜園種)

(I) Type: Sen (籼) or Indica.

(II) Origin of the variety: Selected from native varieties by a farmer in Taichung.

(III) Breeding station: Taiwan Agricultural Research Institute.

(IV) Period of breeding:

1. Year cross was made: ——
2. Year selected: 1946.

(V) Cultural characteristics:

1. Adaptation: Adapted to the Miaoli, Taichung, Changhua, Nantou, Yunlin, and Tainan areas. Yielded well on less fertile soil, and suitable for growing as the 1st crop. Withstand adverse environments.
2. Growing period:
   (1) Time of sowing:
      (a) 1st crop: Late January,
      (b) 2nd crop: ——
   (2) Time of harvesting:
      (a) 1st crop: Mid-July,
      (b) 2nd crop: ——
   (3) Average number of growing days:
      (a) From sowing to transplanting:
         (i) 1st crop: 42 days, (ii) 2nd crop: —— days.
      (b) From transplanting to harvesting:
         (i) 1st crop: 124 days, (ii) 2nd crop: —— days.

(VI) Agronomic characters:

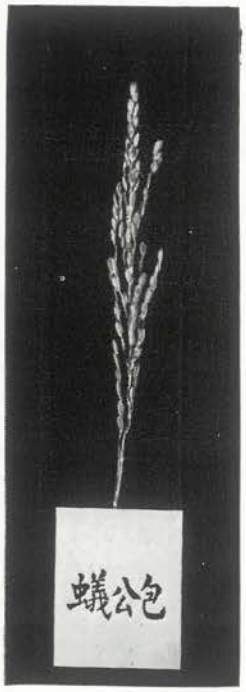
1. Average height in cm: 117.2 (1st crop), —— (2nd crop).
2. Average number of tillers: 12.6 (1st crop), —— (2nd crop).
3. Straw strength: Lodged on very rich soil.
4. Shattering habit: Relatively easy to shatter.
5. Time of maturity: Late.
6. Pest resistance: Very resistant to blast disease.
7. Yield of paddy per hectare: 2,565 kg (1st crop), —— kg (2nd crop).
8. Rice Quality: Ordinary in table quality, but is suitable for preparing rice vermicelli.
9. Other morphological data:

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Tsai-yuan-thon	light green	light yellow	green	green	white	light yellow	light brown	awnless	medium	

Name of Variety

I-kung-pao

(蟻公包)



(I) Type: Sen (籼) or Indica.

(II) Origin of the variety: Introduced from Fukien or Kwangtung province several hundred years ago.

(III) Breeding station: Taiwan Agricultural Research Institute.

(IV) Period of breeding:

1. Year cross was made: ——
2. Year selected: Certified in the process of official sanction of the native rice varieties in 1901-1920.

(V) Cultural characteristics:

1. Adaptation: An Island-wide variety, cultivated all over the rice regions of the Taipei, Keelung, Taoyuan, Hsinchu, Miaoli, Taichung, Changhua, Nantou, Yunlin, Chiayi. Tainan, Pintung, Taitung and Hualian areas. Yielded well on less fertile soil, and suitable for growing as the 1st crop. Withstand drought.
2. Growing period:
   (1) Time of sowing:
      (a) 1st crop: Late January,
      (b) 2nd crop: ——
   (2) Time of harvesting:
      (a) 1st crop: Mid-July,
      (b) 2nd crop: ——
   (3) Average number of growing days:
      (a) From sowing to transplanting:
         (i) 1st crop: 42 days, (ii) 2nd crop: —— days.
      (b) From transplanting to harvesting:
         (i) 1st crop: 119 days, (ii) 2nd crop: —— days.

(VI) Agronomic characters:

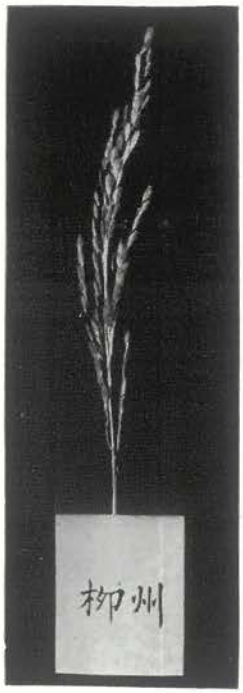
1. Average height in cm: 114.5 (1st crop), —— (2nd crop).
2. Average number of tillers: 11.3 (1st crop), —— (2nd crop).
3. Straw strength: Lodged on very rich soil.
4. Shattering habit: Easy to shatter.
5. Time of maturity: Mid-season.
6. Pest resistance: Very resistant to blast disease.
7. Yield of paddy per hectare: 2,249 kg (1st crop), —— kg (2nd crop).
8. Rice Quality: Medium in table quality.
9. Other morphological data:

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
I-kung-pao	green	light yellow	green	green	white	yellow-ish white	light brown	awnless	medium	with-stand drought

Name of Variety

Liu-chow

(柳 州)



(I) Type: Sen (籼) or Indica.

(II) Origin of the variety: Introduced from Kwangtung province several hundred years ago.

(III) Breeding station: Taiwan Agricultural Research Institute.

(IV) Period of breeding:

1. Year cross was made: ——
2. Year selected: Certified in the process of official sanction of the native rice varieties in 1901-1920.

(V) Cultural characteristics:

1. Adaptation: Adapted to the Taipei, I-lan, Keelung, Taoyuan, Taichung, Changhua, Yunlin, Chiayi, and Hualian areas. Yielded well on less fertile soil and suitable for growing as the 1st crop.
2. Growing period:
   (1) Time of sowing:
      (a) 1st crop: Late January,
      (b) 2nd crop: ——
   (2) Time of harvesting:
      (a) 1st crop: Mid-July,
      (b) 2nd crop: ——
   (3) Average number of growing days:
      (a) From sowing to transplanting:
         (i) 1st crop: days, 42 (ii) 2nd crop: —— days.
      (b) From transplanting to harvesting:
         (i) 1st crop: days, 125 (ii) 2nd crop: —— days.

(VI) Agronomic characters:

1. Average height in cm: 105.5 (1st crop), —— (2nd crop).
2. Average number of tillers: 17.6 (1st crop), —— (2nd crop).
3. Straw strength: Lodged on very rich soil.
4. Shattering habit: Easy to shatter.
5. Time of maturity: Late.
6. Pest resistance: Resistant to blast disease.
7. Yield of paddy per hectare: 2,812 kg (1st crop), —— kg (2nd crop).
8. Rice Quality: Good in table quality.
9. Other morphological data:

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Liu-chow	light green	light yellow	green	green	white	light yellow	brown	awnless	short	tiller freely

Name of Variety

Dec-geo-woo-gen

(低脚烏尖)

(I) **Type:** Sen (籼) or Indica.

(II) **Origin of the variety:** Introduced from Fukien province several hundred years ago.

(III) **Breeding station:** Taiwan Agricultural Research Institute.

(IV) **Period of breeding:**

1. **Year cross was made:** ——
2. **Year selected:** Certified in the process of official sanction of the native rice varieites in 1901–1920.

(V) **Cultural characteristics:**

1. **Adaptation:** Adapted to the Taoyuan, Miaoli, Taichung, Changhua, Nantou, Chiayi, Kaohsiung, and Hualian areas. Yielded well on less fertile soil, and suitable for growing as the 1st crop. Withstand wind storm.
2. **Growing period:**

(1) **Time of sowing:**

(a) **1st crop:** Late January,

(b) **2nd crop:** ——

(2) **Time of harvesting:**

(a) **1st crop:** Mid-July,

(b) **2nd crop:** ——

(3) **Average number of growing days:**

(a) **From sowing to transplanting:**

(i) **1st crop:** 42 **days,** (ii) **2nd crop:** —— **days.**

(b) **From transplanting to harvesting:**

(i) **1st crop:** 132 **days,** (ii) **2nd crop:** —— **days.**

(VI) **Agronomic characters:**

1. **Average height in cm:** 75.3 (1st crop), —— (2nd crop).
2. **Average number of tillers:** 14.5 (1st crop), —— (2nd crop).
3. **Straw strength:** Non-lodged.
4. **Shattering habit:** Relatively easy to shatter.
5. **Time of maturity:** Late.
6. **Pest resistance:** Relatively resistant to disease.
7. **Yield of paddy per hectare:** 2,671 kg (1st crop), —— kg (2nd crop).
8. **Rice Quality:** Good in table quality.
9. **Other morphological data:**

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Dee-geo-woo-gen	deep green	light yellow	green	green	white	light yellow	light brown	awnless	medium	with short straw

Name of Variety

Woo-gen

(烏 尖)

(I) Type: Sen (籼) or Indica.

(II) Origin of the variety: Introduced from Fukien province several hundred years ago.

(III) Breeding station: Taiwan Agricultural Research Institute.

(IV) Period of breeding:

1. Year cross was made: ——
2. Year selected: Certified in the process of official sanction of the native rice varieties in 1901–1920.

(V) Cultural characteristics:

1. Adaptation: Adapted for growing in all rice regions of the province, except in the Pintung, and Taitung districts. Yielded well on less fertile soil, and suitable for growing as the 1st crop.
2. Growing period:
   (1) Time of sowing:
      (a) 1st crop: Late January,
      (b) 2nd crop: ——
   (2) Time of harvesting:
      (a) 1st crop: Mid-July,
      (b) 2nd crop: ——
   (3) Average number of growing days:
      (a) From sowing to transplanting:
         (i) 1st crop: 42 days, (ii) 2nd crop: —— days.
      (b) From transplanting to harvesting:
         (i) 1st crop: 126 days, (ii) 2nd crop: —— days.

(VI) Agronomic characters:

1. Average height in cm: 111.2 (1st crop), —— (2nd crop).
2. Average number of tillers: 15.0 (1st crop), —— (2nd crop).
3. Straw strength: Lodged on very rich soil.
4. Shattering habit: Relatively easy to shatter.
5. Time of maturity: Late.
6. Pest resistance: Relatively resistant to disease.
7. Yield of paddy per hectare: 2,812 kg (1st crop), —— kg (2nd crop).
8. Rice Quality: Medium in table quality.
9. Other morphological data:

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Woo-gen	light green	light yellow	green	green	white	light yellow	light brown	awnless	medium	tiller freely

Name of Variety

Ya-lun

(亞 崙)

(I) **Type:** Sen (籼) or Indica.

(II) **Origin of the variety:** Selected from the native varieties by Ya-lun, the name of a farmer.

(III) **Breeding station:** Taiwan Agricultural Research Institute.

(IV) **Period of breeding:**

1. **Year cross was made:** ——
2. **Year selected:** before 1945.

(V) **Cultural characteristics:**

1. **Adaptation:** Best adapted to the Keelung, and I-lan areas. Yielded well on less fertile soil, and suitable for growing as the 1st crop.
2. **Growing period:**
   (1) **Time of sowing:**
      (a) **1st crop:** Late January,
      (b) **2nd crop:** ——
   (2) **Time of harvesting:**
      (a) **1st crop:** Mid-July,
      (b) **2nd crop:** ——
   (3) **Average number of growing days:**
      (a) **From sowing to transplanting:**
         (i) **1st crop:** 42 **days,** (ii) **2nd crop:** —— **days.**
      (b) **From transplanting to harvesting:**
         (i) **1st crop:** 125 **days,** (ii) **2nd crop:** —— **days.**

(VI) **Agronomic characters:**

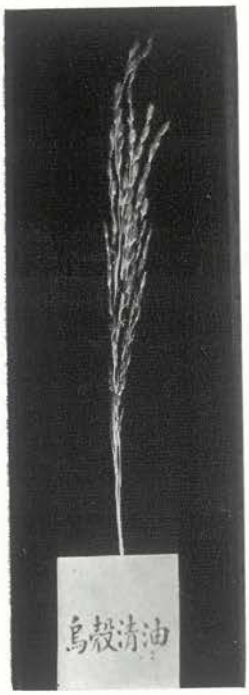
1. **Average height in cm:** 103.4 (**1st crop**), —— (**2nd crop**).
2. **Average number of tillers:** 16.4 (**1st crop**), —— (**2nd crop**).
3. **Straw strength:** Lodged on very rich soil.
4. **Shattering habit:** Relatively easy to shatter.
5. **Time of maturity:** Late.
6. **Pest resistance:** Relatively resistant to disease.
7. **Yield of paddy per hectare:** 2,636 **kg** (**1st crop**), —— **kg** (**2nd crop**).
8. **Rice Quality:** Ordinary in table quality, very similar in quality to the Variety "Bir-me-fen"
9. **Other morphological data:**

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Ya-lun	green	light yellow	green	green	white	light yellow	brown	awnless	medium	

Name of Variety

Woo-co-chin-yu

(烏殼清油)



(I) Type: Sen (籼) or Indica.

(II) Origin of the variety: Introduced form Fukien or Kwangtung province several hundred years ago.

(III) Breeding station: Taiwan Agricultural Research Institute.

(IV) Period of breeding:

1. Year cross was made: ——
2. Year selected: Certified in the process of official sanction of the native rice varieties in 1901-1920.

(V) Cultural characteristics:

1. Adaptation: Better adapted to the I-lan, Miaoli, Yunlin Chiayi, Tainan, Kaohsiung, Pintung and Taitung areas. Yielded well on less fertile soil, and suitable for growing as the 1st crop.
2. Growing period:
   (1) Time of sowing:
      (a) 1st crop: Late January,
      (b) 2nd crop: ——
   (2) Time of harvesting:
      (a) 1st crop: Mid-July.
      (b) 2nd crop: ——
   (3) Average number of growing days:
      (a) From sowing to transplanting:
         (i) 1st crop: 42 days, (ii) 2nd crop: —— days.
      (b) From transplanting to harvesting:
         (i) 1st crop: 120 days, (ii) 2nd crop: —— days.

(VI) Agronomic characters:

1. Average height in cm: 110.9 (1st crop), —— (2nd crop).
2. Average number of tillers: 12.9 (1st crop), —— (2nd crop).
3. Straw strength: Lodged on very rich soil.
4. Shattering habit: Relatively easy to shatter.
5. Time of maturity: Mid-season.
6. Pest resistance: Relatively resistant to disease.
7. Yield of paddy per hectare: 3,022 kg (1st crop), —— kg (2nd crop).
8. Rice Quality: Medium in table quality.
9. Other morphological data:

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Woo-co-chin-yu	light green	light yellow	green	green	white	light yellow	brown	few, short awns	medium	

Name of Variety

I-geo-tze

(矮脚仔)

(I) Type: Sen (籼) or Indica.

(II) Origin of the variety: Introduced from Fukien or Kwangtung province several hundred years ago.

(III) Breeding station: Taiwan Agricultural Research Institute.

(IV) Period of breeding:

1. Year cross was made: ——
2. Year selected: Certified in the process of official sanction of the native rice varieties in 1901–1920.

(V) Cultural characteristics:

1. Adaptation: Adapted to the Taipei, Keelung, Yang-ming-shan, Taoyuan, and Yunlin areas. Yielded well on less fertile soil, and suitable for growing as the 1st crop.
2. Growing period:
   (1) Time of sowing:
      (a) 1st crop: Late January,
      (b) 2nd crop: ——
   (2) Time of harvesting:
      (a) 1st crop: Mid-July,
      (b) 2nd crop: ——
   (3) Average number of growing days:
      (a) From sowing to transplanting:
         (i) 1st crop: 42 days, (ii) 2nd crop: —— days.
      (b) From transplanting to harvesting:
         (i) 1st crop: 117 days, (ii) 2nd crop: —— days.

(VI) Agronomic characters:

1. Average height in cm: 86.9 (1st crop), —— (2nd crop).
2. Average number of tillers: 20.4 (1st crop), —— (2nd crop).
3. Straw strength: Non-lodged.
4. Shattering habit: Relatively easy to shatter.
5. Time of maturity: Mid-season.
6. Pest resistance: Relatively resistant to disease.
7. Yield of paddy per hectare: 2,847 kg (1st crop), —— kg (2nd crop).
8. Rice Quality: Medium in table quality.
9. Other morphological data:

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
I-geo-tze	green	yellow	green	green	white	yellow-ish white	yellow	awnless	medium	

Name of Variety

Ban-tien-tze

(半天仔)

(I) Type: Sen (籼) or Indica.

(II) Origin of the variety: Introduced from Fukien or Kwangtung province several hundred years ago.

(III) Breeding station: Taiwan Agricultural Research Institute.

(IV) Period of breeding:

1. Year cross was made: ——
2. Year selected: Certified in the process of official sanction of the native rice varieties in 1901–1920.

(V) Cultural characteristics:

1. Adaptation: Adapted to the I-lan, Keelung, Taoyuan, Hsinchu, Miaoli, Changhua, and Taichung areas. Yielded well on less fertile soil, and suitable for growing as the 1st crop.
2. Growing period:
   (1) Time of sowing:
      (a) 1st crop: Late January,
      (b) 2nd crop: ——
   (2) Time of harvesting:
      (a) 1st crop: Mid-July,
      (b) 2nd crop: ——
   (3) Average number of growing days:
      (a) From sowing to transplanting:
         (i) 1st crop: 42 days, (ii) 2nd crop: —— days.
      (b) From transplanting to harvesting:
         (i) 1st crop: 129 days, (ii) 2nd crop: —— days.

(VI) Agronomic characters:

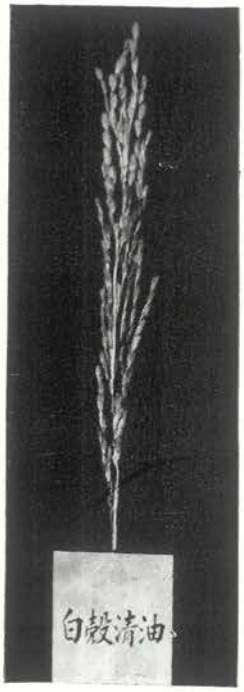
1. Average height in cm: 123.5 (1st crop), —— (2nd crop).
2. Average number of tillers: 9.1 (1st crop), —— (2nd crop).
3. Straw strength: Non-lodged.
4. Shattering habit: Relatively easy to shatter.
5. Time of maturity: Late.
6. Pest resistance: Relatively resistant to disease.
7. Yield of paddy per hectare: 2,671 kg (1st crop), —— kg (2nd crop).
8. Rice Quality: Ordinary in table quality.
9. Other morphological data:

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Ban-tien-tze	light green	light yellow	green	green	white	light yellow	brown	awnless	medium	

Name of Variety

Bir-co-chin-yu

(白殼清油)



(I) Type: Sen (籼) or Indica.

(II) Origin of the variety: Introduced from Fukien or Kwangtung province several hundred years ago.

(III) Breeding station: Taiwan Agriculturl Research Institute.

(IV) Period of breeding:

1. Year cross was made: ——
2. Year selected: Certified in the process of official sanction of the native rice varieties in 1901–1920.

(V) Cultural characteristics:

1. Adaptation: Adapted to the Taipei, Keelung, Changhua, Taichung, Nantou, and Chiayi areas. Yielded well on less fertile soil, and suitable for growing as the 1st crop.
2. Growing period:
   (1) Time of sowing:
      (a) 1st crop: Late January,
      (b) 2nd crop: ——
   (2) Time of harvesting:
      (a) 1st crop: Mid-July,
      (b) 2nd crop: ——
   (3) Average number of growing days:
      (a) From sowing to transplanting:
         (i) 1st crop: 42 days, (ii) 2nd crop: —— days.
      (b) From transplanting to harvesting:
         (i) 1st crop: 117 days, (ii) 2nd crop: —— days.

(VI) Agronomic characters:

1. Average height in cm: 131.9 (1st crop), —— (2nd crop).
2. Average number of tillers: 9.1 (1st crop), —— (2nd crop).
3. Straw strength: Lodged on very rich soil.
4. Shattering habit: Relatively easy to shatter.
5. Time of maturity: Mid-season.
6. Pest resistance: Relatively resistant to disease.
7. Yield of paddy per hectare: 2,601kg (1st crop), —— kg (2nd crop).
8. Rice Quality: Medium in table quality.
9. Other morphological data:

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Bir-co-chin-yu	green	light yellow	green	green	white	light yellow	light yellow	awnless	medium	

Name of Variety

Dan-kwang-hwa-loo

(短廣花螺)

(I) Type: Sen (籼) or Indica.

(II) Origin of the variety: Introduced from Fukien or Kwangtung province several hundred years ago.

(III) Breeding station: Taiwan Agricultural Research Institute.

(IV) Period of breeding:

1. Year cross was made: ——
2. Year selected: Certified in the process of official sanction of the native rice varieties in 1901–1920.

(V) Cultural characteristics:

1. Adaptation: Best adapted to the Taipei, and Miaoli areas. Yielded well on less fertile soil, and suitable for growing as the 1st crop.
2. Growing period:
   (1) Time of sowing:
      (a) 1st crop: Late January,
      (b) 2nd crop: ——
   (2) Time of harvesting:
      (a) 1st crop: Mid July,
      (b) 2nd crop: ——
   (3) Average number of growing days:
      (a) From sowing to transplanting:
         (i) 1st crop: 42 days, (ii) 2nd crop: —— days.
      (b) From transplanting to harvesting:
         (i) 1st crop: 121 days, (ii) 2nd crop: —— days.

(VI) Agronomic characters:

1. Average height in cm: 112.0 (1st crop), —— (2nd crop).
2. Average number of tillers: 9.3 (1st crop), —— (2nd crop).
3. Straw strength: Lodged on very rich soil.
4. Shattering habit: Relatively easy to shatter.
5. Time of maturity: Mid-season.
6. Pest resistance: Resistant to disease.
7. Yield of paddy per hectare: 2,214 kg (1st crop), —— kg (2nd crop).
8. Rice Quality: Less sticky in cooking quality.
9. Other morphological data:

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Dan-kwang-hwa-loo	green	light yellow	green	green	white	light yellow	light brown	awnless	short	a round-grain variety of native rice

Name of Variety

Liu-tou-tze

(柳頭仔)

(I) **Type:** Sen (籼) or Indica.

(II) **Origin of the variety:** Introduced from Fukien or Kwangtung province several hundred years ago.

(III) **Breeding station:** Taiwan Agricultural Research Institute.

(IV) **Period of breeding:**

1. **Year cross was made:** ——
2. **Year selected:** Certified in the process of official sanction of the native rice varieties in 1901-1920.

(V) **Cultural characteristics:**

1. **Adaptation:** Adapted to the Taipei, Keelung, Yang-ming-shan, Taoyuan, and Yunlin areas. Yielded well on less fertile soil, and suitable for growing as the 1st crop.
2. **Growing period:**
   (1) **Time of sowing:**
      (a) **1st crop:** Late January,
      (b) **2nd crop:** ——
   (2) **Time of harvesting:**
      (a) **1st crop:** Mid-July,
      (b) **2nd crop:** ——
   (3) **Average number of growing days:**
      (a) **From sowing to transplanting:**
         (i) **1st crop:** 42 **days,** (ii) **2nd crop:** —— **days.**
      (b) **From transplanting to harvesting:**
         (i) **1st crop:** 112 **days,** (ii) **2nd crop:** —— **days.**

(VI) **Agronomic characters:**

1. **Average height in cm:** 79.9 (1st crop), —— (2nd crop).
2. **Average number of tillers:** 24.6 (1st crop), —— (2nd crop).
3. **Straw strength:** Non-lodged.
4. **Shattering habit:** Relatively easy to shatter.
5. **Time of maturity:** Mid-season.
6. **Pest resistance:** Resistant to blast disease.
7. **Yield of paddy per hectare:** 4,000 kg (1st crop), —— kg (2nd crop).
8. **Rice Quality:** Ordinary in table quality.
9. **Other morphological data:**

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Liu-tou-tze	green	light yellow	green	green	white	light yellow	light brown	awnless	medium	with short straw

Name of Variety

Kao-geo-liu-chow

(高脚柳州)

(I) **Type:** Sen (籼) or Indica.

(II) **Origin of the variety:** Introduced from Kwangtung province several hundred years ago.

(III) **Breeding station:** Taiwan Agricultural Research Institute.

(IV) **Period of breeding:**

1. **Year cross was made:** ——
2. **Year selected:** Certified in the process of official sanction of the native rice varieties in 1901–1920.

(V) **Cultural characteristics:**

1. **Adaptation:** Adapted to the Taipei, I-lan, Changhua, and Yunlin areas. Yielded well on less fertile soil, and suitable for growing as the 1st crop.
2. **Growing period:**
   (1) **Time of sowing:**
      (a) **1st crop:** Late January,
      (b) **2nd crop:** ——
   (2) **Time of harvesting:**
      (a) **1st crop:** Mid-July,
      (b) **2nd crop:** ——
   (3) **Average number of growing days:**
      (a) **From sowing to transplanting:**
         (i) **1st crop:** 42 **days,** (ii) **2nd crop:** —— **days.**
      (b) **From transplanting to harvesting:**
         (i) **1st crop:** 127 **days,** (ii) **2nd crop:** —— **days.**

(VI) **Agronomic characters:**

1. **Average height in cm:** 117.9 (1st crop), —— (2nd crop).
2. **Average number of tillers:** 12.0 (1st crop), —— (2nd crop).
3. **Straw strength:** Lodged on very rich soil.
4. **Shattering habit:** Relatively easy to shatter.
5. **Time of maturity:** Late.
6. **Pest resistance:** Relatively resistant to disease.
7. **Yield of paddy per hectare:** 3,198 kg (1st crop), —— kg (2nd crop).
8. **Rice Quality:** Medium in table quality.
9. **Other morphological data:**

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Kao-geo-liu-chow	green	light yellow	green	green	white	light yellow	brown	awnless	medium	

Name of Variety

woo-li

(烏 粒)

(I) **Type:** Sen (籼) or Indica.

(II) **Origin of the variety:** Introduced from Fukien province several hundred years ago.

(III) **Breeding station:** Taiwan Agricultural Research Institute.

(IV) **Period of breeding:**

1. **Year cross was made:** ——
2. **Year selected:** Certified in the process of official sanction of the native rice varieties in 1901–1920.

(V) **Cultural characteristics:**

1. **Adaptation:** Adapted to the Pintung, Taitung, and Hualian areas. Yielded well on less fertile soil, and suitable for growing as the 1st crop.
2. **Growing period:**

(1) **Time of sowing:**

(a) **1st crop:** Late January,

(b) **2nd crop:** ——

(2) **Time of harvesting:**

(a) **1st crop:** Mid-July,

(b) **2nd crop:** ——

(3) **Average number of growing days:**

(a) **From sowing to transplanting:**

(i) **1st crop:** 42 **days,** (ii) **2nd crop:** —— **days.**

(b) **From transplanting to harvesting:**

(i) **1st crop:** 129 **days,** (ii) **2nd crop:** —— **days.**

(VI) **Agronomic characters:**

1. **Average height in cm:** 127.7 (**1st crop**), —— (**2nd crop**).
2. **Average number of tillers:** 9.3 (**1st crop**), —— (**2nd crop**).
3. **Straw strength:** Lodged on very rich soil.
4. **Shattering habit:** Relatively easy to shatter.
5. **Time of maturity:** Late.
6. **Pest resistance:** Very resistant to disease.
7. **Yield of paddy per hectare:** 2,459 **kg** (**1st crop**), —— **kg** (**2nd crop**).
8. **Rice Quality:** Medium in table quality.
9. **Other morphological data:**

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Woo-li	green	light yellow	green	green	white	light yellow	brown	awnless	medium	

Name of Variety

Hwa-loo

(花 螺)

(I) Type: Sen (籼) or Indica.

(II) Origin of the variety: Introduced from Fukien or Kwangtung province several hundred years ago.

(III) Breeding station: Taiwan Agricultural Research Institute.

(IV) Period of breeding:

1. Year cross was made: ——
2. Year selected: Certified in the process of official sanction of the native rice varieties in 1901-1920.

(V) Cultural characteristics:

1. Adaptation: Adapted to the I-lan, Keelung, Taoyuan, Hsinchu, Miaoli, Changhua, and Taichung areas. Yielded well on less fertile soil, and suitable for growing as the 1st crop.
2. Growing period:
   (1) Time of sowing:
      (a) 1st crop: Late January,
      (b) 2nd crop: ——
   (2) Time of harvesting:
      (a) 1st crop: Mid-July,
      (b) 2nd crop: ——
   (3) Average number of growing days:
      (a) From sowing to transplanting:
         (i) 1st crop: 42 days, (ii) 2nd crop: —— days.
      (b) From transplanting to harvesting:
         (i) 1st crop: 121 days, (ii) 2nd crop: —— days.

(VI) Agronomic characters:

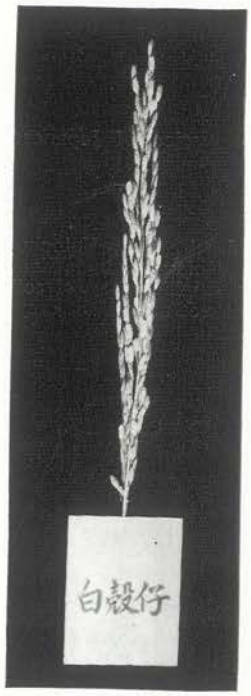
1. Average height in cm: 116.0 (1st crop), —— (2nd crop).
2. Average number of tillers: 9.6 (1st crop), —— (2nd crop).
3. Straw strength: Lodged on very rich soil.
4. Shattering habit: Relatively easy to shatter.
5. Time of maturity: Mid-season.
6. Pest resistance: Resistant to disease.
7. Yield of paddy per hectare: 2,109 kg (1st crop), —— kg (2nd crop).
8. Rice Quality: Ordinary in table quality.
9. Other morphological data:

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Hwa-loo	green	light yellow	green	green	white	light yellow	light brown	awnless	medium	most characters are similar to the variety Dan kang-hwa-loo.

Name of Variety

Bir-co-tze

(白殼仔)



(I) Type: Sen (籼) or Indica.

(II) Origin of the variety: Introduced from Fukien or Kwangtung province several hundred years ago.

(III) Breeding station: Taiwan Agricultural Research Institute.

(IV) Period of breeding:

1. Year cross was made: ——
2. Year selected: Certified in the Process of official sanction of the native rice varieties in 1901–1920.

(V) Cultural characteristics:

1. Adaptation: Adapted to the Taipei, Keelung, Changhua, Taichung, Nantou, and Chiayi areas. Yielded well on less fertile soil, and suitable for growing during both the 1st and the 2nd crops.
2. Growing period:
   (1) Time of sowing:
      (a) 1st crop: Late January,
      (b) 2nd crop: ——
   (2) Time of harvesting:
      (a) 1st crop: Mid-July,
      (b) 2nd crop: ——
   (3) Average number of growing days:
      (a) From sowing to transplanting:
         (i) 1st crop: 42 days, (ii) 2nd crop: 25 days.
      (b) From transplanting to harvesting:
         (i) 1st crop: 123 days, (ii) 2nd crop: 104 days.

(VI) Agronomic characters:

1. Average height in cm: 118.1 (1st crop), 130.7 (2nd crop).
2. Average number of tillers: 14.4 (1st crop), 9.6 (2nd crop).
3. Straw strength: Lodged on very rich soil.
4. Shattering habit: Relatively easy to shatter.
5. Time of maturity: Late.
6. Pest resistance: Relatively resistant to disease.
7. Yield of paddy per hectare: 3,515 kg (1st crop), 3,163 kg (2nd crop).
8. Rice Quality: Medium in table qulity.
9. Other morphological data:

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Bir-co-tze	green	light yellow	green	green	white	light yellow	light yellow	few, medium awns	medium	

Name of Variety

Mean-down

(敏 黨)

(I) **Type:** Sen (籼) or Indica.

(II) **Origin of the variety:** Introduced from Vietnam many years ago.

(III) **Breeding station:** Taiwan Agricultural Research Institute.

(IV) **Period of breeding:**

1. **Year cross was made:** ——
2. **Year selected:** Mass selected during the period of Japanese occupation.

(V) **Cultural characteristics:**

1. **Adaptation:** Better adapted to the Taipei, Taoyuan, Hsinchu, Miaoli, Taichung, Changhua, Nantou, Yunlin, Chiayi, Tainan, Kaohsiung, and Hualian areas. Yielded well on a wide range of soil types. Best for growing as the 2nd crop, but not as the 1st crop.
2. **Growing period:**
   (1) **Time of sowing:**
      (a) **1st crop:** Late January to early February,
      (b) **2nd crop:** Early to mid-July.
   (2) **Time of harvesting:**
      (a) **1st crop:** Mid-July,
      (b) **2nd crop:** Early to mid-November.
   (3) **Average number of growing days:**
      (a) **From sowing to transplanting:**
         (i) **1st crop:** 45 **days,** (ii) **2nd crop:** 25 **days.**
      (b) **From transplanting to harvesting:**
         (i) **1st crop:** 123 **days,** (ii) **2nd crop:** 108 **days.**

(VI) **Agronomic characters:**

1. **Average height in cm:** —— (**1st crop**), 119.5 (**2nd crop**).
2. **Average number of tillers:** —— (**1st crop**), 13.9 (**2nd crop**).
3. **Straw strength:** Lodged on very rich soil.
4. **Shattering habit:** Relatively easy to shatter.
5. **Time of maturity:** Late.
6. **Pest resistance:** Fairly resistant to moth-borer.
7. **Yield of paddy per hectare:** —— **kg** (**1st crop**), 3,269 **kg** (**2nd crop**).
8. **Rice Quality:** Medium in table quality.
9. **Other morphological data:**

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Mean-down	green	light yellow	green	green	white	yellow-ish white	light yellow	awnless	medium	

Name of Variety

Chin-gou-tsan

(菁菓占)

(I) Type: Sen (籼) or Indica.

(II) Origin of the variety: Introduced from Fukien province several hundred years ago.

(III) Breeding station: Taiwan Agricultural Research Institute.

(IV) Period of breeding:

1. Year cross was made: ——
2. Year selected: Certified in the process of official sanction of the native rice varieties in 1901–1920.

(V) Cultural characteristics:

1. Adaptation: Better adapted to the Nantou, Yunlin, Chiayi, Kaohsiung, and Pintung areas. Yielded well on less fertile soil, and suitable only for growing as the 2nd crop.
2. Growing period:
   (1) Time of sowing:
      (a) 1st crop: ——
      (b) 2nd crop: Early to mid-July.
   (2) Time of harvesting:
      (a) 1st crop: ——
      (b) 2nd crop: Early to mid-November.
   (3) Average number of growing days:
      (a) From sowing to transplanting:
         (i) 1st crop: —— days, (ii) 2nd crop: 25 days.
      (b) From transplanting to harvesting:
         (i) 1st crop: —— days, (ii) 2nd crop: 114 days.

(VI) Agronomic characters:

1. Average height in cm: —— (1st crop), 132.5 (2nd crop).
2. Average number of tillers: —— (1st crop), 10.6 (2nd crop).
3. Straw strength: Lodged on very rich soil.
4. Shattering habit: Relatively easy to shatter.
5. Time of maturity: Late.
6. Pest resistance: Relatively resistant to blast disease.
7. Yield of paddy per hectare: —— kg (1st crop), 2,207 kg (2nd crop).
8. Rice Quality: Good in table quality.
9. Other morphological data:

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Chin-gou-tsan	green	light yellow	green	green	white	light yellow	light brown	few, short awns	medium	

Name of Variety

Shun-gan

(霜 降)

(I) Type: Sen (籼) or Indica.

(II) Origin of the variety: Introduced from Fukien or Kwangtung province several hundred years ago.

(III) Breeding station: Taiwan Agricultural Research Institute.

(IV) Period of breeding:

1. Year cross was made: ——
2. Year selected: Certified in the process of official sanction of the native rice varieties in 1901-1920.

(V) Cultural characteristics:

1. Adaptation: Better adapted to the Taichung, Changhua, Nantou, Yunlin, Chiayi, and Taitung areas. Yielded well on less fertile soil, and suitable for growing as the 2nd crop.
2. Growing period:
   (1) Time of sowing:
      (a) 1st crop: ——
      (b) 2nd crop: Early July.
   (2) Time of harvesting:
      (a) 1st crop: ——
      (b) 2nd crop: Early to mid-November.
   (3) Average number of growing days:
      (a) From sowing to transplanting:
         (i) 1st crop: —— days, (ii) 2nd crop: 25 days.
      (b) From transplanting to harvesting:
         (i) 1st crop: —— days, (ii) 2nd crop: 93 days.

(VI) Agronomic characters:

1. Average height in cm: —— (1st crop), 140.9 (2nd crop).
2. Average number of tillers: —— (1st crop), 11.0 (2nd crop).
3. Straw strength: Lodged on very rich soil.
4. Shattering habit: Relatively easy to shatter.
5. Time of maturity: Early.
6. Pest resistance: Relatively resistant to disease.
7. Yield of paddy per hectare: —— kg (1st crop), 3,107 kg (2nd crop).
8. Rice Quality: Medium in table quality.
9. Other morphological data:

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Shun-gan	green	light yellow	green	green	white	light yellow	light yellow	few, short awns	short	

Name of Variety

Guze

(格 仔)

(I) **Type:** Sen (籼) or Indica.

(II) **Origin of the variety:** Introduced from Fukien or Kwangtung province several hundred years ago.

(III) **Breeding station:** Taiwan Agricultural Research Institute.

(IV) **Period of breeding:**

1. **Year cross was made:** ——
2. **Year selected:** Certified in the process of official sanction of the native rice varieties in 1901–1920.

(V) **Cultural characteristics:**

1. **Adaptation:** Better adapted to the Taipei, Taichung, Changhua, Nantou, Chiayi, Tainan, and Hualian areas. Yielded well on less fertile soil, and suitable for growing as the 2nd crop.
2. **Growing period:**
   (1) **Time of sowing:**
      (a) **1st crop:** ——
      (b) **2nd crop:** Early to mid-July.
   (2) **Time of harvesting:**
      (a) **1st crop:** ——
      (b) **2nd crop:** Early to mid-November.
   (3) **Average number of growing days:**
      (a) **From sowing to transplanting:**
         (i) **1st crop:** —— **days,** (ii) **2nd crop:** 25 **days.**
      (b) **From transplanting to harvesting:**
         (i) **1st crop:** —— **days,** (ii) **2nd crop:** 101 **days.**

(VI) **Agronomic characters:**

1. **Average height in cm:** —— (1st crop), 109.0 (2nd crop).
2. **Average number of tillers:** —— (1st crop), 11.9 (2nd crop).
3. **Straw strength:** Lodged on very rich soil.
4. **Shattering habit:** Relatively easy to shatter.
5. **Time of maturity:** Mid-season.
6. **Pest resistance:** Relatively resistant to disease.
7. **Yield of paddy per hectare:** —— kg (1st crop), 3,472 kg (2nd crop).
8. **Rice Quality:** Medium in table quality.
9. **Other morphological data:**

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Guze	deep green	light yellow	green	green	white	light yellow	light yellow	awnless	short	

Name of Variety

Siam

(暹 羅)

(I) Type: Sen (籼) or Indica.

(II) Origin of the variety: Introduced from Tailand many years ago.

(III) Breeding station: Taiwan Agricultural Research Institute.

(IV) Period of breeding:

1. Year cross was made: ——
2. Year selected: Mass selected during the period of Japanese occupation.

(V) Cultural characteristics:

1. Adaptation: Better adapted to the Miaoli, Taichung, Changhua, Nantou, Yunlin, Chiayi, and Kaohsiung areas. Yielded well on less fertile soil, and suitable for growing as the 2nd crop.
2. Growing period:
   (1) Time of sowing:
      (a) 1st crop: ——
      (b) 2nd crop: Early to mid-July.
   (2) Time of harvesting:
      (a) 1st crop: ——
      (b) 2nd crop: Early to mid-November.
   (3) Average number of growing days:
      (a) From sowing to transplanting:
         (i) 1st crop: —— days, (ii) 2nd crop: 25 days.
      (b) From transplanting to harvesting:
         (i) 1st crop: —— days, (ii) 2nd crop: 108 days.

(VI) Agronomic characters:

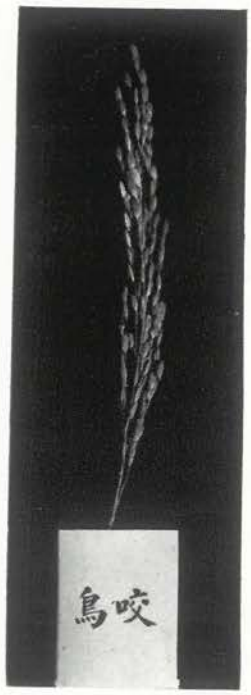
1. Average height in cm: —— (1st crop), 136.0 (2nd crop).
2. Average number of tillers: —— (1st crop), 11.1 (2nd crop).
3. Straw strength: Lodged on very rich soil.
4. Shattering habit: Relatively easy to shatter.
5. Time of maturity: Late.
6. Pest resistance: Relatively resistant to disease.
7. Yield of paddy per hectare: —— kg (1st crop), 3,353 kg (2nd crop).
8. Rice Quality: Good in table quality.
9. Other morphological data:

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Siam	green	light yellow	green	green	white	light yellow	light yellow	awnless	medium	

Name of Variety

Niao-yao

(鳥 咬)



(I) **Type:** Sen (籼) or Indica.

(II) **Origin of the variety:** Introduced from Fukien or Kwangtung province several hundred years ago.

(III) **Breeding station:** Taiwan Agricultural Research Institute.

(IV) **Period of breeding:**

1. **Year cross was made:** ——
2. **Year selected:** Certified in the process of official sanction of the native rice varieties in 1901–1920.

(V) **Cultural characteristics:**

1. **Adaptation:** Better adapted to the Nantou, Yunlin, Chiayi, and Tainan areas. Yielded well on less fertile soil, and suitable for growing as the 2nd crop.
2. **Growing period:**
   (1) **Time of sowing:**
      (a) **1st crop:** ——
      (b) **2nd crop:** Early to mid-July.
   (2) **Time of harvesting:**
      (a) **1st crop:** ——
      (b) **2nd crop:** Early to mid-November.
   (3) **Average number of growing days:**
      (a) **From sowing to transplanting:**
         (i) **1st crop:** —— **days,** (ii) **2nd crop:** 25 **days.**
      (b) **From transplanting to harvesting:**
         (i) **1st crop:** —— **days,** (ii) **2nd crop:** 110 **days.**

(VI) **Agronomic characters:**

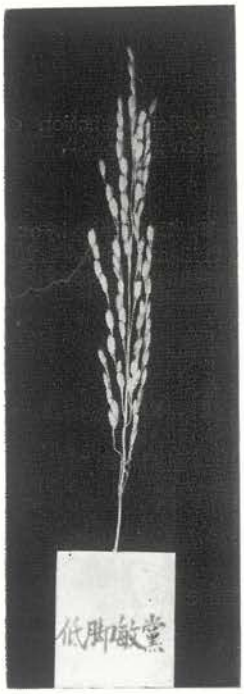
1. **Average height in cm:** —— (1st crop), 127.7 (2nd crop).
2. **Average number of tillers:** —— (1st crop), 10.4 (2nd crop).
3. **Straw strength:** Easy to lodge.
4. **Shattering habit:** Relatively easy to shatter.
5. **Time of maturity:** Late.
6. **Pest resistance:** Relatively resistant to disease.
7. **Yield of paddy per hectare:** —— kg (1st crop), 2,024 kg (2nd crop).
8. **Rice Quality:** Good in table quality.
9. **Other morphological data:**

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Niao-yao	deep green	brown	green	green	white	light yellow	light brown	awnless	medium	

Name of Variety

Dee-geo-mean-don

(低脚敏黨)



(I) Type: San (籼) or Indica.

(II) Origin of the variety: Selected by a farmer in central Taiwan.

(III) Breeding station: Taiwan Agricultural Research Institute.

(IV) Period of breeding:

1. Year cross was made: ——
2. Year selected: Certified before 1945 in the process of official sanction of the native rice varieties.

(V) Cultural characteristics:

1. Adaptation: Best adapted to Changhua, and Chiayi areas. Yielded well on less fertile soil, and suitable for growing as the 2nd crop.
2. Growing period:
   (1) Time of sowing:
      (a) 1st crop: ——
      (b) 2nd crop: Early to mid-July.
   (2) Time of harvesting:
      (a) 1st crop: ——
      (b) 2nd crop: Early to mid-November.
   (3) Average number of growing days:
      (a) From sowing to transplanting:
         (i) 1st crop: —— days, (ii) 2nd crop: 25 days.
      (b) From transplanting to harvesting:
         (i) 1st crop: —— days, (ii) 2nd crop: 107 days.

(VI) Agronomic characters:

1. Average height in cm: —— (1st crop), 99.9 (2nd crop).
2. Average number of tillers: —— (1st crop), 15.2 (2nd crop).
3. Straw strength: Non-lodged.
4. Shattering habit: Relatively easy to shatter.
5. Time of maturity: Late.
6. Pest resistance: Relatively resistant to disease.
7. Yield of paddy per hectare: —— kg (1st crop), 2,411 kg (2nd crop).
8. Rice Quality: Medium in table quality.
9. Other morphological data:

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Dee-geo-mean-don	green	light yellow	green	green	white	light yellow	light yellow	awnless	medium	always with fully fertilized grains

Name of Variety

Bir-co-yuan-li

(白穀員粒)

(I) Type: Sen (籼) or Indica.

(II) Origin of the variety: Introduced from Fukien or Kwangtung province several hundred years ago.

(III) Breeding station: Taiwan Agricultural Research Institute.

(IV) Period of breeding:

1. Year cross was made: ——
2. Year selected: Certified in the process of official sanction of the native rice varieties in 1901–1920.

(V) Cultural characteristics:

1. Adaptation: Best adapted to the Chiayi, and Tainan areas. Yielded well on less fertile soil, and suitable for growing as the medium or the 2nd crop.
2. Growing period:
   (1) Time of sowing:
      (a) 1st crop: ——
      (b) 2nd crop: Early to mid-May.
   (2) Time of harvesting:
      (a) 1st crop: ——
      (b) 2nd crop: Early to mid-October.
   (3) Average number of growing days:
      (a) From sowing to transplanting:
         (i) 1st crop: —— days, (ii) 2nd crop: 30 days.
      (b) From transplanting to harvesting:
         (i) 1st crop: —— days, (ii) 2nd crop: 115 days.

(VI) Agronomic characters:

1. Average height in cm: —— (1st crop), 148.8 (2nd crop).
2. Average number of tillers: —— (1st crop), 9.0 (2nd crop).
3. Straw strength: Easy to lodge.
4. Shattering habit: Relatively easy to shatter.
5. Time of maturity: Late.
6. Pest resistance: Relatively resistant to disease.
7. Yield of paddy per hectare: —— kg (1st crop), 2,160 kg (2nd crop).
8. Rice Quality: Medium in table quality.
9. Other morphological data:

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Bir-co-yuan-li	green	light brown	green	green	white	light yellow	light yellow	awnless	medium	with big panicles

Name of Variety

Tainan-ta-bir

(臺南大白)

(I) Type: Sen (籼) or Indica.

(II) Origin of the variety: Selected from native varieties by a farmer in northern Taiwan.

(III) Breeding station: Taiwan Agricultural Research Institute.

(IV) Period of breeding:

1. Year cross was made: ——
2. Year selected: Certified in the process of official sanction of the native rice varieties about the year in 1945.

(V) Cultural characteristics:

1. Adaptation: Best adapted to the I-lan, and Taipei areas. Yielded well on less fertile soil, and suitable for growing as the 2nd crop.
2. Growing period:
   (1) Time of sowing:
      (a) 1st crop: ——
      (b) 2nd crop: Early to mid-July.
   (2) Time of harvesting:
      (a) 1st crop: ——
      (b) 2nd crop: Early to mid-November.
   (3) Average number of growing days:
      (a) From sowing to transplanting:
         (i) 1st crop: —— days, (ii) 2nd crop: 25 days.
      (b) From transplanting to harvesting:
         (i) 1st crop: —— days, (ii) 2nd crop: 105 days.

(VI) Agronomic characters:

1. Average height in cm: —— (1st crop), 124.2 (2nd crop).
2. Average number of tillers: —— (1st crop), 9.6 (2nd crop).
3. Straw strength: Easy to lodge.
4. Shattering habit: Relatively easy to shatter.
5. Time of maturity: Mid-season.
6. Pest resistance: Relatively resistant to disease.
7. Yield of paddy per hectare: —— kg (1st crop), 2,144 kg (2nd crop).
8. Rice Quality: Medium in table quality.
9. Other morphological data:

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Tainan-ta-bir	green	yellow	green	light greenish yellow	light yellow	light yellow	yellow	few awns	medium	now is gradually substituted by "Wooch'un" Variety

Name of Variety

Man-tze

(蔓 仔)

(I) Type: Sen (籼) or Indica.

(II) Origin of the variety: Introduced from Fukien or Kwangtung province several hundred years ago.

(III) Breeding station: Taiwan Agricultural Research Institute.

(IV) Period of breeding:

1. Year cross was made: ——
2. Year selected: Certified in the process of official sanction of the native rice varieties in 1901-1920.

(V) Cultural characteristics:

1. Adaptation: Better adapted to the Taoyuan, Nantou, Chiayi, and Tainan areas. Yielded well on less fertile soil and suitable for growing as the 2nd crop.
2. Growing period:
   (1) Time of sowing:
      (a) 1st crop: ——
      (b) 2nd crop: Early to mid-July.
   (2) Time of harvesting:
      (a) 1st crop: ——
      (b) 2nd crop: Early to mid-November.
   (3) Average number of growing days:
      (a) From sowing to transplanting:
         (i) 1st crop: —— days, (ii) 2nd crop: 25 days.
      (b) From transplanting to harvesting:
         (i) 1st crop: —— days, (ii) 2nd crop: 109 days.

(VI) Agronomic characters:

1. Average height in cm: —— (1st crop), 125.1 (2nd crop).
2. Average number of tillers: —— (1st crop), 14.2 (2nd crop).
3. Straw strength: Lodged on very rich soil.
4. Shattering habit: Relatively easy to shatter.
5. Time of maturity: Late.
6. Pest resistance: Relatively resistant to disease.
7. Yield of paddy per hectare: —— kg (1st crop), 1,439 kg (2nd crop).
8. Rice Quality: Medium in table quality.
9. Other morphological data:

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Man-tze	green	light yellow	green	green	white	light yellow	light yellow	awnless	short	

Name of Variety

Bir-gou-tze

(白格仔)

(I) Type: Sen (籼) or Indica.

(II) Origin of the variety: Introduced from Fukien or Kwagntung province several hundred years ago.

(III) Breeding station: Taiwan Agricultural Research Institute.

(IV) Period of breeding:

1. Year cross was made: ——
2. Year selected: Certified in the process of official sanction of the native rice varieties in 1901–1920.

(V) Cultural characteristics:

1. Adaptation: Better adapted to the Taoyuan, Yunlin, Chiayi, and Tainan areas. Yielded well on less fertile soil, and suitable for growing during both the 1st and the 2nd crops.
2. Growing period:
   (1) Time of sowing:
      (a) 1st crop: Late January,
      (b) 2nd crop: Early to mid-July.
   (2) Time of harvesting:
      (a) 1st crop: Late June to early July,
      (b) 2nd crop: Early to mid-November.
   (3) Average number of growing days:
      (a) From sowing to transplanting:
         (i) 1st crop: 45 days, (ii) 2nd crop: 25 days.
      (b) From transplanting to harvesting:
         (i) 1st crop: 118 days, (ii) 2nd crop: 93 days.

(VI) Agronomic characters:

1. Average height in cm: 123.0 (1st crop), 119.8 (2nd crop).
2. Average number of tillers: 15.9 (1st crop), 12.0 (2nd crop).
3. Straw strength: Lodged on very rich soil.
4. Shattering habit: Relatively easy to shatter.
5. Time of maturity: Early.
6. Pest resistance: Relatively resistant to disease.
7. Yield of paddy per hectare: 3,760 kg (1st crop), 2,420 kg (2nd crop).
8. Rice Quality: Medium in table quality.
9. Other morphological data:

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Bir-gou-tze	green	light brown	green	green	white	yellow	light brown	few, short awns	medium	

Name of Variety

Bir-co

(白 穀)

(I) **Type:** Sen (籼) or Indica.

(II) **Origin of the variety:** Introduced from Fukien or Kwangtung province several hundred years ago.

(III) **Breeding station:** Taiwan Agricultural Research Institute.

(IV) **Period of breeding:**

1. **Year cross was made:** ——
2. **Year selected:** Certified in the process of official sanction of the native rice varieties in 1901–1920.

(V) **Cultural characteristics:**

1. **Adaptation:** Adapted to the Taipei, Keelung, Taichung, Changhua, Nantou, Yunlin, Tainan, and Kaohsiung areas. Yielded well on a wide variety of paddy soil types. Suitable for growing as the 2nd crop.
2. **Growing period:**

(1) **Time of sowing:**

(a) **1st crop:** ——

(b) **2nd crop:** Early to mid-July.

(2) **Time of harvesting:**

(a) **1st crop:** ——

(b) **2nd crop:** Early to mid-November.

(3) **Average number of growing days:**

(a) **From sowing to transplanting:**

(i) **1st crop:** —— **days,** (ii) **2nd crop:** 25 **days.**

(b) **From transplanting to harvesting:**

(i) **1st crop:** —— **days,** (ii) **2nd crop:** 92 **days.**

(VI) **Agronomic characters:**

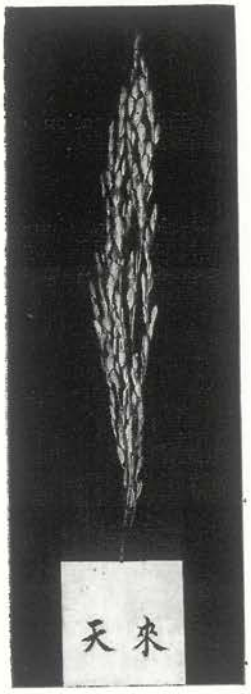
1. **Average height in cm:** —— (1st crop), 138.5 (2nd crop).
2. **Average number of tillers:** —— (1st crop), 11.6 (2nd crop).
3. **Straw strength:** Lodged on very rich soil.
4. **Shattering habit:** Very easy to shatter.
5. **Time of maturity:** Early.
6. **Pest resistance:** Relatively resistant to disease.
7. **Yield of paddy per hectare:** —— kg (1st crop), 2,214kg (2nd crop).
8. **Rice Quality:** Medium in table quality.
9. **Other morphological data:**

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Bir-co	light green	light yellow	green	green	white	light yellow	light yellow	medium awns	medium	

Name of Variety

Tien-lie

(天 來)



(I) Type: Sen (籼) or Indica.

(II) Origin of the variety: Introduced from Fukien or Kwangtung province several hundred years ago.

(III) Breeding station: Taiwan Agricultural Research Institute.

(IV) Period of breeding:

1. Year cross was made: ——
2. Year selected: Certified in the process of official sanction of the native rice varieties in 1901–1920.

(V) Cultural characteristics:

1. Adaptation: Best adapted to the Tainan area. Yielded well on less fertile soil. Suitable for growing as the 2nd crop.
2. Growing period:
   (1) Time of sowing:
      (a) 1st crop: ——
      (b) 2nd crop: Early to mid-July.
   (2) Time of harvesting:
      (a) 1st crop: ——
      (b) 2nd crop: Early to mid-November.
   (3) Average number of growing days:
      (a) From sowing to transplanting:
         (i) 1st crop: —— days, (ii) 2nd crop: 25 days.
      (b) From transplanting to harvesting:
         (i) 1st crop: —— days, (ii) 2nd crop: 108 days.

(VI) Agronomic characters:

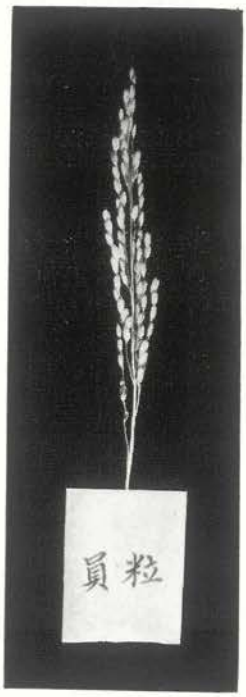
1. Average height in cm: —— (1st crop), 121.0 (2nd crop).
2. Average number of tillers: —— (1st crop), 12.7 (2nd crop).
3. Straw strength: Easy to lodge.
4. Shattering habit: Relatively easy to shatter.
5. Time of maturity: Late.
6. Pest resistance: Relatively resistant to disease.
7. Yield of paddy per hectare: —— kg (1st crop), 2,917 kg (2nd crop).
8. Rice Quality: Medium in table quality.
9. Other morphological data:

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Tien-lie	green	light brown	green	green	white	light yellow	light brown	awnless	medium	with big panicle

Name of Variety

Yuan-li

(員 粒)



(I) **Type:** Sen (籼) or Indica.

(II) **Origin of the variety:** Introduced from Fukien or Kwangtung province several hundred years ago.

(III) **Breeding station:** Taiwan Agricultural Research Institute.

(IV) **Period of breeding:**

1. **Year cross was made:** ——
2. **Year selected:** Certfied in the process of official sanction of the native rice varieties in 1901-1920.

(V) **Cultural characteristics:**

1. **Adaptation:** Adapted to the Miaoli, Changhua, Nantou, Yunlin, Chiayi, Tainan, Kaohsiung, and Pintung areas. Yielded well on a wide variety of paddy soil types, and suitable for growing as the 2nd crop. Withstand drought.
2. **Growing period:**
   (1) **Time of sowing:**
      (a) **1st crop:** ——
      (b) **2nd crop:** Early to mid-July.
   (2) **Time of harvesting:**
      (a) **1st crop:** ——
      (b) **2nd crop:** Early to mid-November.
   (3) **Average number of growing days:**
      (a) **From sowing to transplanting:**
         (i) **1st crop:** —— **days,** (ii) **2nd crop:** 25 **days.**
      (b) **From transplanting to harvesting:**
         (i) **1st crop:** —— **days,** (ii) **2nd crop:** 107 **days.**

(VI) **Agronomic characters:**

1. **Average height in cm:** —— (1st crop), 116.7 (2nd crop).
2. **Average number of tillers:** —— (1st crop), 11.6 (2nd crop).
3. **Straw strength:** Lodged on rich soil.
4. **Shattering habit:** Relatively easy to shatter.
5. **Time of maturity:** Late.
6. **Pest resistance:** Relatively resistant to disease.
7. **Yield of paddy per hectare:** —— kg (1st crop), 2,671 kg (2nd crop).
8. **Rice Quality:** Medium in table quality.
9. **Other morphological data:**

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Yuan-li	green	light yellow	green	green	white	light yellow	light yellow	awnless	short	

Name of Variety

Chu-tze

(粗 仔)

(I) Type: Sen (籼) or Indica.

(II) Origin of the variety: Introduced from Fukien or Kwangtung province several hundred years ago.

(III) Breeding station: Taiwan Agricultural Research Institute.

(IV) Period of breeding:

1. Year cross was made: ——
2. Year selected: Certified in the process of official sanction of the native rice varieties in 1901–1920.

(V) Cultural characteristics:

1. Adaptation: Best adapted to the Hsinchu area. Yielded well on a wide variety of paddy soil types. Suitable for growing as the 2nd crop.
2. Growing period:
   (1) Time of sowing:
      (a) 1st crop: ——
      (b) 2nd crop: Early to mid-July.
   (2) Time of harvesting:
      (a) 1st crop: ——
      (b) 2nd crop: Early to mid-November.
   (3) Average number of growing days:
      (a) From sowing to transplanting:
         (i) 1st crop: —— days, (ii) 2nd crop: 25 days.
      (b) From transplanting to harvesting:
         (i) 1st crop: —— days, (ii) 2nd crop: 99 days.

(VI) Agronomic characters:

1. Average height in cm: —— (1st crop), 129.3 (2nd crop).
2. Average number of tillers: —— (1st crop), 8.9 (2nd crop).
3. Straw strength: Lodged on very rich soil.
4. Shattering habit: Relatively easy to shatter.
5. Time of maturity: Early.
6. Pest resistance: Relatively resistant to disease.
7. Yield of paddy per hectare: —— kg (1st crop), 2,880 kg (2nd crop).
8. Rice Quality: Medium in table quality.
9. Other morphological data:

Name of Variety	Color of Plant Parts							Awns	Grain Shape	Remark
	Leaf	Apiculus	Stem	Stem base	Stigma	Empty glume	Kernel			
Chu-tze	green	light yellow	green	green	white	light yellow	light brown	very few, & very short awns	medium	

APPENDIX

RICE PRODUCTION AND CONSUMPTION IN TAIWAN

By TSIN-SAN MIU

(繆 進 三)

Reprinted

from

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DEPARTMENT OF AGRONOMY

TAIWAN AGRICULTURAL RESEARCH INSTITUTE

TAIPEI, TAIWAN, REPUBLIC OF CHINA

RICE PRODUCTION AND CONSUMPTION IN TAIWAN

By Tsin-san Miu*

INTRODUCTION

Rice is the most important crop in Taiwan, as it is the main food as well as one of the leading earners of foreign exchange, Because of its local demand as well as the geographic position of the Island, rice is grown twice a year. The rice fields are mainly found on the alluvial plains along the coast. The total acreage in 1957 is around 800,000 hectares (including the two crops) and the average yield is 2,348 kg. per hectare.

During the period of Japanese occupation, many improved rice varieties, commercially known as the Ponlai rice (Japonica type) were developed. This is the most important group of rice in Taiwan. The kernel of this type is short and broad. The same variety of Ponlai rice can be grown at the first and second crops. Since the restoration of Taiwan to China, a number of new Ponlai varieties were developed. They are more resistant to the blast disease than the old ones.

Chailai or native varieties (Indica type) is a little less important in Taiwan. They were introduced from China mainland a long time ago and belong to the medium grain type, some of the varieties are adapted only to the first crop, and the others, second.

The first crop covers the period from January to July; and the second, from July to November.

The upland and glutinous rice is of little importance in this island.

Preparation For Sowing

Rice nursery: The rice nursery is located at a suitable place in the paddy-field. During the first crop, sunny and windless places near windbreakers are chosen. During the second crop, however, sunny and airy places are preferred so as to prevent disease and insect damage.

The size of a nursery is about 4–5% of the acreage to be planted.

The paddy-field destined for a rice nursery, the first plowing is done after the harvesting of the second crop rice during winter time, and plowed again when spring comes. (These plows are drawn by cattle) Then it is crushed with hand hoe or cultivator. When the plowing and soil crushing are over, then it is irrigated and puddled to make the nursery surface level and smooth.

The commercial fertilizers used in the soils of rice nursery are ammonium sulphate, potassium sulphate, and calcium superphosphate.

Seed gathering: Pure seeds produced from the extension seed farm will be used for extension to farmers for seed renewal and will exchange with seeds from general rice farmers. Extension seed farm is generally operated by contracted farmers, and subsidized by the

* Senior Agronomist of Taiwan Agricultural Research Institute.

Government. But some of the farmers use seeds saved from their previous crop, and it is always in better purity. However, there is no "red rice" mixed.

Segregation of sound seeds: The soundness of seed is tested by a specially liquid prepared from sodium chloride, ammonium sulphate or mud suspension water. The proper specific gravity of this liquid is at 1.13 for nonglutinous rice and 1.08 for glutinous and upland rice.

Seeds are soaked in the liquid and mixed well by stirring. Those coming to the surface are cast away. The settled seeds, after washed carefully with clean water, are used for propagation.

Disinfection of Seeds: For controlling seed-borne disease, seeds are disinfected to soak by 0.1% water solution of "Granosan" for one hour.

Soaking of Seeds: After disinfection, the seeds are soaked in water for a few days before they are sown in the nursery.

Hastening of germination: During the first crop when the climate is not warm enough, various methods are used to hasten the germination of the soaked seeds.

One of the commonest practices is to place the seeds in a basket coated with straw and put it inside a warm room.

Water of about 50°C. is poured on the surface, and then the seeds are thoroughly stirred so as to insure an even warmth within the basket to hasten germination.

During the second crop in July, the soaked seeds are sown directly.

Transplanting

Paddy-field prepared for transplanting, it is plowed, crushed, irrigated and puddled to make the surface level and smooth like the seedling nursery had been done.

Seedlings that are 40 days old are considered most suitable for transplanting at the first crop; and 15 days old, the second crop.

The accepted spacing is either 22.5×22.5 cm or 25×25 cm. The number of seedlings in a hill is normally 3–5, although it varies according to the rice variety, to the soil fertility and to the amount of fertilizers applied.

During the first crop, the transplanting date ranges from January to the end of March. During the second crop, it ranges from the middle to the end of July.

Fertilization

Farmers in Taiwan habitually use both compost manure and chemical fertilizers in paddy fields.

The fertilizers commonly used in Taiwan are ammonium sulphate, calcium cyanamide, calcium superphosphate and potassium chloride. The average ratio (N: P_2O_5: K_2O) among three major elements actually distributed is 93:42:14 Kg/ha for first crop and 77:27:13 for second crop in addition to the use of about 6,000 kg. of compost manure for each ha.

Compost manure is applied as basic dressing while chemical fertilizers are applied as a half basic dressing and the remainder as top dressing used at the time of second and third weeding.

Irrigation

When the transplanting is finished, the paddy fields are irrigated. The irrigation system in Taiwan is operated very efficiently. The water generally obtained from rivers and artificial lakes or ponds floating down through the canal and the branches to the paddy fields by

natural gravity. And a few places of southern Taiwan needed water wells using pumps to raise the water for irrigation, or directly pumped up the water from streams to the field. (Pumps used are always made in Taiwan).

It is necessary to irrigate paddy fields constantly to supply the water lost from seepage and evaporation.

The standards for the water depth, according to the different periods of growth of rice plants, are as follows:

The depth of water is kept at about 3–4.5 cms during the period 15 days after transplating to facilitate the rooting of seedling. And then the paddy field is submerged once with water 5 cm deep. After 6–10 days when the soil surface is about to be exposed due to gradual decrease of water, the original water level is restored by re-irrigating. This operation is repeated till the end of the effective tillering stage. Then the paddy field is drained and dried for 5 days one week before the earing stage.

Following this, the rice plants begin forming young ears, heading, flower and to set seeds.

Harvesting, Drying and Storage

When the rice panicle turns yellow, it is ripe enough for harvesting, which is to be undertaken at best, about 30–35 days after heading.

Reaping is done exclusively with a hand sickle. In reaping, clusters of rice plants are grasped by the left hand and cut off at their base with a sickle held in the right hand.

In threshing, a "pedal rotary thresher" is always used. As unhulled rice grains when harvested contain 20–25 percent of moisture it must be exposed in the sunshine 3 to 4 days to reduce the moisture content to about 11–12%.

The unhulled rice, after threshing, drying, and wind-sifting is often put in jute bags and then stored in the storage.

Diseases

Rice blast is the most serious disease in Taiwan, especially during the first crop.

Studies have been made on the factors conditioning the prevalence of this disease in order to find out the fundamental principle of the control of the disease in the tropics.

The resistance of the host plant is enhanced in proportion to the increase of air and soil temperature at which they are grown, since at lower temperature there is an accumulation of nitrogenous compounds in the plant, while at higher temperature, N-content is decreased and silicic accumulation increased.

In the tropical rice crop as well as in the second crop of the sub-tropics (as in Taiwan), the rice-blast disease is not so serious because of the fact that the host resistance is intensified by warm weather in spite of constant propagation of the pathogen. So in the subtropical and tropical regions the prevalence is governed mostly by the factors relating to the resistance of the host. The prevention of fungous growth by fungicides is of little importance for the control of the disease in this Island; the increase of the host resistance is primarily important. For the latter purpose it is advisable to increase the resistance of host plant by cross-breeding.

A number of resistant varieties are being developed by the Taiwan Agricultural Research Institute at Taipei and its Branch Station at Chiayi.

"Granosan." a mercuric fungicide, was assumed to be effective n disinfecting rice seeds before sowing, and in recent years, it is rather popularly practiced.

Other important rice infesting diseases are: brown spot, gibberella blight and sheathrot.

Insect Pests In Storage

Because of the humid climate, only the paddy rice, but not the rough or polished, is suitable for long-period storage in Taiwan. About 1,200,000 tons, or about 70% of the annual production, of paddy rice are usually stored for more than four months. That collected by the Food Bureau is preserved at 434 public and private warehouses, most of them are with milling facilities.

Among the 23 species of insect pests revealed from an extensive survey in 1951 at the representative warehouses, *Rhizopertha dominica* Fabr., *Sitophilus oryzae* Linn., *Tribolium castaneum* Herbst and *Sitotroga cerealella* Olivier are the most destructive. The yearly loss due to such pests during storage is, as estimated, about 5%. Pyrenone and impregnated lindane dust were once used in a number of governmental warehouses, and in recent years, methyl bromide fumigation is extensively used for rice to be exported. The dosage is one pound of methyl bromide per thousand cubic feet for 24 hours.

Insect Pests*

Over eighty species of insects injurious to rice crop have been reported from Taiwan.

Among them, moth-borers, the sping leaf beetle, the Lema beetle, fulgorids, leaf-hoppers, and the black bug are the more important.

The paddy borer, *Schoenobius incertellus* wk., is the most serious rice pest and is chiefly distributed in the central and southern parts. It has 4–5 generations each year in the north and 5–6 generations in the south.

The stem borer, *Chilo simplex* Butl., is most prevalent in the northern part of Taiwan. It has 3–4 generations in a year. The purple stem borer, *Sesamia inferens*, wk., is of little importance. Emulsion of Folidol (46.6%), PM (50%) or Diazinon (60%), diluted with 2,000 times of water, is to be applied at 750–950 liters per hectare on the lower portion of the rice plant before the larvae reaching the third inster. The high efficacy of these insecticides is due to the penetrating action, which kill the larvae inside the stem and leaf sheath. On the other hand, concentrated emulsion of endrin, diluted with 500–800 times of water may be applied at the rate of 900–1100 liters per hectare on the upper portion of the rice plants.

The sping leaf beetle (*Hispa similis* Uhmann) has three generations each year. It is most abundant generally in May to August, and severely attacks the seed bed or newly transplanted fields of the second crop.

The Lema bettle (*Lema oryzae* Kuwayama) has only one generation in a year and generally attacks the first crop in March to May.

The fulgorids and leaf-hopper usually have 6–10 generations in a year. They are generally most serious to the first crop in May to June and to the second crop in September to October. These pests can be controlled by dusting 10% DDT or 1–3% γ-BHC Powder, at the rate of 25–30 kg. per hectare. The black rice bug (*Scotinophara Lurida* Burm.), has five generations in a year. The application of 3% γ-BHC dust gives a successful result.

* Information is supplied by Mr. T. T. Liang.

Varieties Cultivated

As for rice varieties recently cultivated in Taiwan, both "Ponlai" and "Chailai" rice furnishes the staple food for the people.

The distribution of the different varieties of rice in Taiwan is given in the following:

RICE VARIETIES IN TAIWAN

First Crop

Variety Name (Ponlai Rice)	%	Variety Name (Native Rice)	%
1. Taichung No. 65	31.17	1. Bir-me-fen	17.14
2. Chia-nan No. 8	9.30	2. Tsai-yuan-thon	11.57
3. Taichung No. 150	4.53	3. I-kung-pao	10.23
4. Kaohsiung No. 22	4.30	4. Liu-chow	10.01
5. Kwanfu No. 401	4.03	5. Dee-geo-woo-gen	8.20
6. Hsinchu No. 24	3.77	6. Woo-gen	7.70
7. Hsinchu No. 50	3.61	7. Ya-Lun	4.86
8. Taichung No. 155	3.58	8. Woo-co-chin-yu	3.81
9. Kaohsiung No. 18	3.06	9. I-geo-tze	2.53
10. Taichung No. 154	3.01	10. Ban-tien-tze	2.45
11. Taichung No. 153	2.72	11. Bir-co-chin-yu	2.08
12. Kaohsiung No. 27	2.68	12. Dan-kwang-haw-loo	1.70
13. Taipei No. 127	2.26	13. Liu-tou-tze	1.49
14. Chia-nan No. 2	2.19	14. Kao-geo-liu-chow	1.26
15. Taichung No. 122	2.13	15. Woo-li	1.14
16. Kaohsiung No. 10	1.78	16. Hwa-loo	1.13
17. Taipei No. 177	1.17	17. Bir-gou-tze	1.08
Other Varieties	14.71	Other Varieties	11.62
Total:		Total	
127 Varieties	100	116 Varieties	100

Second Crop

Variety Name (Ponlai Rice)	%	Variety Name (Native Rice)	%
1. Taichung No. 65	27.26	1. Mean-down	18.53
2. Chia-nan No. 8	12.36	2. Chin-gou-tsan	13.31
3. Chia-nan No. 2	7.41	3. Shun-gan	9.70
4. Kaohsiung No. 27	5.68	4. Guze	8.87
5. Taichung No. 150	4.66	5. Siam	5.92
6. Kwanfu No. 401	4.59	6. Niao-yao	3.86
7. Taichung No. 155	3.17	7. Dee-geo-mean-don	3.36
8. Kaohsiung No. 22	2.69	8. Bir-co-yuan-li	2.21
9. Hsinchu No. 24	2.68	9. Tainan-ta-bir	2.13
10. Taichung No. 153	2.66	10. Man-tze	1.95
11. Kaohsiung No. 10	2.19	11. Bir-co-tze	1.85
12. Hsinchu No. 50	2.04	12. Bir-co	1.72
13. Taichung No. 162	1.94	13. Tien-lie	1.34

Second Crop

Variety Name (Ponlai Rice)	%	Variety Name (Native Rice)	%
14. Taichung No. 154	1.77	14. Ta-tse-thon	1.09
15. Kaohsiung No. 18	1.21	15. Yuan-li	1.09
16. Chia-nan No. 14	1.16	16. Tsai-yuan-thon	1.08
		17. Chu-tze	1.06
Other Varieties	16.53	Other Varieties	20.93
Total:		Total	
131 Varieties	100	146 Varieties	100

Short grain varieties of rice in this Island are always with better quality, that most consumers prefer to eat.

Governmental Aids

The food policy of the Government is to encourage more production and to hold more paddy rice. The Governmental aids include the distribution of chemical fertilizers, soybean cake, common salt, etc., and the loans or subsidies for installing waterpumps, threshing machines, ox-dragging wagons, and drying grounds. Because of these aids, the farmers willingly cooperate with the Government in cultivating and producing rice as much as practicable.

Since chemical fertilizers, imported and locally produced, are entirely controlled by the Food Bureau, and are much in need by the rice producers, a paddy rice-fertilizer barter system has been established. On the other hand, governmental loans are to be repaid in part, by paddy rice, and land taxes are to be paid by the same. In such way, the surplus rice naturally goes to the hands of the Government, and the price of rice in free market fluctuates very little.

Mills and Milling Capacities

There are 3,991 rice mills in Taiwan, with a total of 20,446 H.P. and 11,012 employees. They handle 321,792 M/T of milled rice per month or 3,851,534 M/T per year.

The milling capacities shown by different horse-power are as follows:

Class (H.P.)	Mills	%
2–5	3,187	79.85
5–10	547	13.70
10–15	185	4.64
15–20	32	0.80
20–25	11	0.28
25–30	10	0.25
Over 30	19	0.48
Total	3,991	100

According to the table given above, most of the rice mills in Taiwan own 2–5 horse-power and are known as a sort of "family industry."

Research Centers

Taiwan Agricultural Research Institute is situated at the southern suburb of Taipei Municipality. With its large farms and the streams and mountains surrounded, it is not only a research center but also a spot of natural beauty.

The Institute was established in 1902. It is responsible for the agricultural promotion of this province. Since its establishment, many outstanding works have been achieved, particularly in recent years many new varieties of rice, sweet-potato, peanut, and flax have been developed.

Under this provincial institute, there are 8 branch experiment stations scattered at different localities. In Taichung, Tai-nan, Ping-tung and other districts, they have local experiment stations.

Crop Rotation

Rice is generally planted twice a year in Taiwan, except that in a few places water supply is insufficient or crop rotation system is practiced, it is planted only once a year. Rice planted befo e April 20 or harvested before August 15 is habitually classified as the first crop, and that planted after April 20 or harvested after August 15, as the second crop. In the Tainan district, due to the practice of a particular triennially alternated irrigation system, the so-called intermediate rice crop prevails. This is planted only once a year and classified either as the first or the second crop according to its harvesting time.

Some common rotation systems of paddy field are shown below:

Spring to Summer	Summer to Autumn	Winter to Spring
(Southern Taiwan)		
(a) Rice (first crop)	Rice (second crop)	Soybean Sweet-potato Green manure
(Central Taiwan)		
(a) Rice (first crop)	Rice (second crop)	Wheat Rape Tobacco Flax
(Northern Taiwan)		
(a) Rice (first crop)	Sweet-potato	Green manure
(b) Rice (first crop)	Rice (second crop) Soybean, Peanut	Green manure Vegetables

Local Consumption

Rice is the most important staple food crop in Taiwan. It is mainly used for local consumption.

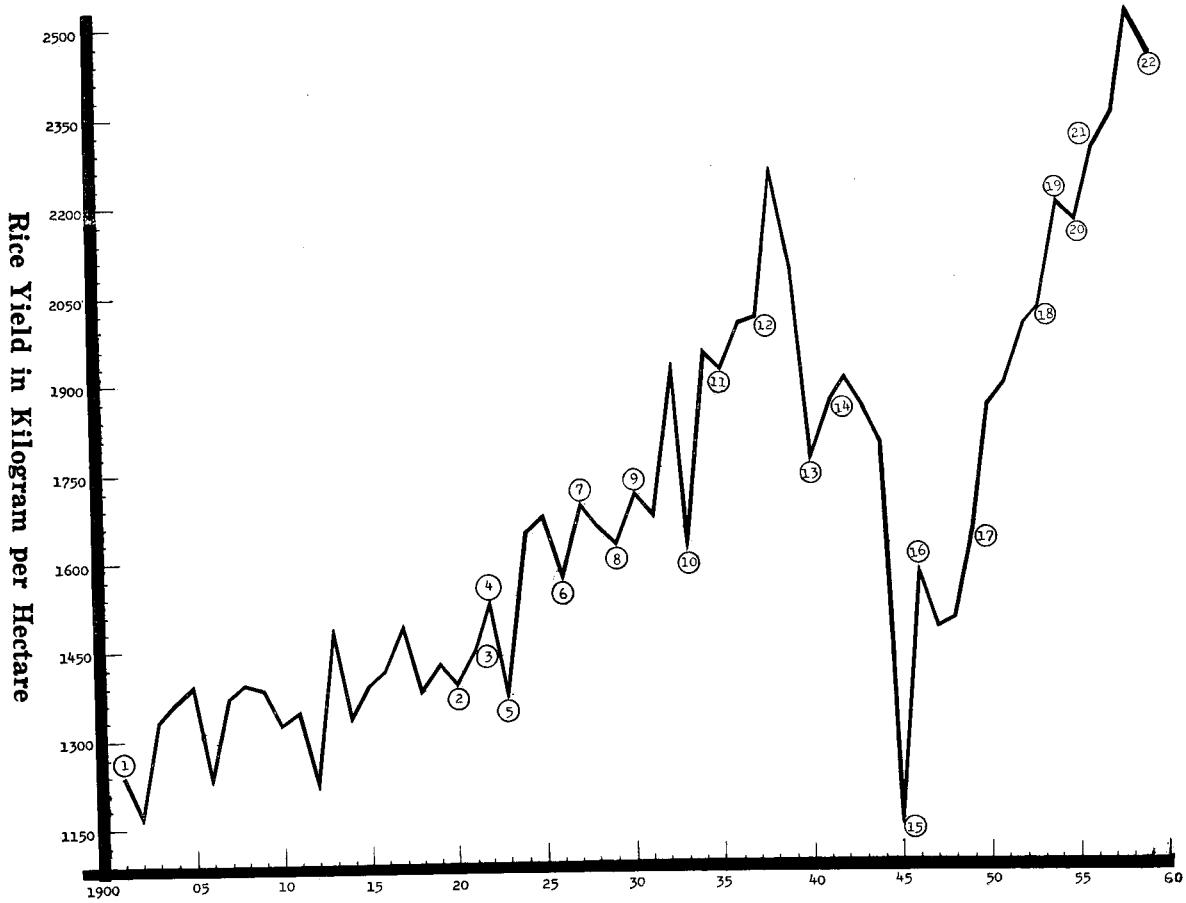
Commercially the paddy rice is classified into (1) Ponlai rice (Japonica type), (2) Native rice (Indica type), (3) round glutinous rice (Japonica type) and (4) long glutinous rice (Indica type). The ponlai and native rices are the most important ones used as mainfood. Without it, the people would suffer. The small amount for export, always Ponlai rice, is of best quality.

The glutinous rice is used for cake making, and for fermentation industry.

We have three meals a day in Taiwan, and the daily consumption for an adult is 600 grams of milled rice in average.

For lunch and supper, rice is usually used as the main food. People living in towns often take wheat flour cakes and soybean milk as their breakfast; but most of the villagers still take rice paste, with some accessary food, in the morning.

A Correlative Chart Showing the Acreage Yield of Rice in Taiwan as Affected by the Various Important Contributory Factors of the Past



Explanatory notes of the chart:

1. The beginning of registration and selection of the native rice varieties.
2. Works on the registration and selection of the native varieties completed.
3. Irrigation associations reorganized and new irrigation projects encouraged.
4. New improved method for cultivating the Japonica rice varieties widely applied.
5. Second rice crop suffered from drought.
6. The prevalence of rice blast disease.
7. Rice varieties resistant to blast disease began distributed.
8. The gradual widespread use of the Ponlai rice varieties.
9. The Chia-nan irrigation system began to supply water.
10. Damages to the second rice crop caused by flood, drought and storm.
11. The reorganization of irrigation associations completed.
12. The outbreak of Sino-Japanese War.
13. Wind-storm damages to the second rice crop.
14. The outbreak of World War II.
15. The end of World War II.
16. The lack of sufficient chemical fertilizers for rice crop shortly after the restoration of Taiwan resulted the acreage increase of the native varieties and correspondingly the decrease of the Ponlai varieties.
17. The 37.5% rent reduction program initiated in 1949 which alleviated the economic stress in rural farms.
18. The act of the land-to-the-tiller program brought into effect in 1953, and most of the tenants became owners of the land.
19. The practice of rotational system of irrigation in 1954 which greatly economized the water for rice cultivation.
20. Island-wide suffering from drought.
21. The rapid distribution of the "Chia-nung" No. 242, a new improved rice variety highly resistant to blast disease.
22. Severe flood in the central Taiwan.